ELSEVIER

Theriogenology 59 (2003) 2041–2082

Theriogenology

Author Index, Volume 59

Aalto, J., *see* Lindeberg, H., (59) (2003) 368
Aalto, J., *see* Piltti, K., (59) (2003) 403
Abdoon, A.S.S., Kandill, O.M., Luciano, A.M., Nawito, M.F. and Gandol, F., Effect of protein supplementation and intracellular camp levels on the developmental competence of in vitro matured buffalo oocytes (59) (2003) 481
Abdul Jalil, A.K., *see* Rezaei, N., (59) (2003) 497
Accardo, C., *see* Isachenko, V., (59) (2003) 1209
Adachi, N., *see* Akagi, S., (59) (2003) 232
Adachi, N., *see* Matsukawa, K., (59) (2003) 454
Adams, G.P., *see* Kemp, K.E., (59) (2003) 395
Adams, G.P., *see* McCorkell, R.B., (59) (2003) 398
Adams, G.P., *see* Ratto, M.H., (59) (2003) 413
Adams, G.P., *see* Singh, J., (59) (2003) 534
Adelaide, *see* Hartwich, K.M., (59) (2003) 256
Adona, P.R., Leal, C.L.V., Faria, C.C. and Rocha Meiosis inhibition and reversibility with different cyclin dependent kinase inhibitors in bovine oocytes, (59) (2003) 479
Adona, P.R., Leal, C.L.V., Rocha, A.A. and Faria, C.C., Effects of different specific inhibitors of maturation promoting factor (MPF) on bovine embryo development in vitro, (59) (2003) 480
Agarwal, S.K., *see* Selvaraju, S., (59) (2003) 1459
Agüero, A., *see* Neild, D.M., (59) (2003) 1693
Ahmad, N., *see* Ahmad, Z., (59) (2003) 1189
Ahmad, Z., Anzar, M., Shahab, M., Ahmad, N. and Andrabi, S.M.H., Sephadex and sephadex ion-exchange filtration improves the quality and freezability of low-grade buffalo semen ejaculates, (59) (2003) 1189
Ahn, B.S., *see* Park, S.J., (59) (2003) 227
Ainslie, A., *see* Pallante, B., (59) (2003) 277
Akagi, S., Adachi, N., Matsukawa, K. and Takahashi, S., Effect of timing of oocyte-cell fusion on developmental potential of bovine nuclear transfer embryos from cumulus cells, (59) (2003) 232
Akagi, S., *see* Matsukawa, K., (59) (2003) 454
Akita, T., *see* Iwamoto, M., (59) (2003) 261
Alabart, J.L., Folch, J., Fernández-Arias, A., Ramón, J.P., Garbayo, J.M. and Cocero, M.J., Screening of some variables influencing the results of embryo transfer in the ewe. Part II: Two-day-old embryos, (59) (2003) 1345
Alabart, J.L., *see* Isachenko, V., (59) (2003) 1209
Alberio, R. and Campbell, K.H.S., Inhibition of transcription in bovine fetal fibroblasts exposed to *Xenopus laevis* egg extracts, (59) (2003) 318
Alberio, R.H., *see* Ferré, L.B., (59) (2003) 301
Albrecht, K.A., *see* Fischer-Brown, A.E., (59) (2003) 364
Alexander, B., Rho, G.J., Betts, D.H. and King, W.A., Production of sheep nuclear transfer embryos from roscovitine-treated adult somatic cells, (59) (2003) 233
Alexander, B., *see* Rho, G.J., (59) (2003) 282
Ali, A. and Sirard, M.A., The potential roles of communications through gap junction between cumulus cells and oocytes during in vitro maturation of bovine oocytes, (59) (2003) 482
Ali, A.A., Bilodeau, J.F. and Sirard, M.A., Antioxidant requirements for bovine oocytes varies during in vitro maturation, fertilization and development, (59) (2003) 839
Aller Atucha, J.F., *see* Ferré, L.B., (59) (2003) 301
Allis, D., *see* Sarmento, O., (59) (2003) 330
Alvarez, I., *see* Royo, L.J., (59) (2003) 431
Alvarez, M., *see* Anel, L., (59) (2003) 386
Alvarez, M., *see* Diaz, A., (59) (2003) 217
Alvarez, M., *see* Garcia-Macias, (59) (2003) 220
Alvarez, M., *see* Martinez-Pastor, F., (59) (2003) 397
Alvarez, M., *see* Rodriguez, C., (59) (2003) 478
Alves, B.C.A., Hossepian de Lima, V.F.M., Teixeira, C.M. and Moreira-Filho, C.A., Use of primers derived from a new sequence of the bovine Y chromosome for sexing *Bos taurus* and *Bos indicus* embryos, (59) (2003) 1415
Alves, J.D.R., *see* Oliveira, D.F.F., (59) (2003) 375

Elsevier Science Inc.
PII: S0093-691X(03)00053-0

Amiridis, G.S., *see* Gouletsou, P.G., (59) (2003) 1959
Amstislavsky, S., *see* Piltti, K., (59) (2003) 403
Anderson, G., *see* Fieni, F., (59) (2003) 1515
Anderson, G.B., *see* Bertolini, M., (59) (2003) 416
Andrabi, S.M.H., *see* Ahmad, Z., (59) (2003) 1189
Andrade, E.R., *see* Seneda, M.M., (59) (2003) 1435
Andrade, J.C.O., Oliveira, M.A.L., Lima, P.F., Bartolomeu, C.C., Guido, S.I., Tenório Filho, F., Azevedo, J.B., Oliveira, L.R.S., Bianchini, S. and Danda, E.P.N., The use of CIDR in the superovulatory protocol of nelore donors at different stages of estrus cycle, (59) (2003) 358
Anel, E., *see* Garcia-Macias, (59) (2003) 220
Anel, E., *see* Martinez-Pastor, F., (59) (2003) 397
Anel, E., *see* Paz, P., (59) (2003) 228
Anel, E., *see* Rodriguez, C., (59) (2003) 478
Anel, L., Enrique, E., Alvarez, M., Garcia-Macias, V., Martinez, F., Borragan, S., Celada, M., Herraez, P. and Paz, P., Computerized analysis of sperm motility in european brown bear (*Ursus arctos*) semen, (59) (2003) 386
Anel, L., *see* Diaz, A., (59) (2003) 217
Anel, L., *see* Garcia-Macias, (59) (2003) 220
Anel, L., *see* Martinez-Pastor, F., (59) (2003) 397
Anel, L., *see* Paz, P., (59) (2003) 228
Anel, L., *see* Rodriguez, C., (59) (2003) 478
Anh, N.T., *see* Duc, N.H., (59) (2003) 442
Anh, N.T., *see* Hanh, N.V., (59) (2003) 488
Antonio Presicce, G., *see* Neglia, G., (59) (2003) 1123
Anzar, M., *see* Ahmad, Z., (59) (2003) 1189
Aoki, S., *see* Kitamura, S., (59) (2003) 367
Aoki, S., *see* Nishisouzu, T., (59) (2003) 531
Aoki, S., Takahashi, R., Nishisouzu, T., Kitamura, S., Dochi, O., Kishi, M., Morita, S., Komiya, M., Terawaki, Y. and Koyama, H., A comparative investigation of the characteristics of Holstein cows cloned from colostrum-derived mammary gland epithelial cells in an automatic milking system, (59) (2003) 234
Aono, F., *see* Bao, S., (59) (2003) 1231
Aono, F., *see* Nakata, K., (59) (2003) 275
Aoyagi, Y., *see* Ideta, A., (59) (2003) 359
Apimeteetumrong, M., Laloy, E., Lavergne, Y., Chesne, P., Heyman, Y., Techakumphu, M., Kunawongkrit, A., Renard, J.P. and Vignon, X., Effect of recipient cytoplast on the kinetics of DNA replication during the 1-cell stage in bovine nuclear transfer embryos, (59) (2003) 235
Araujo, A.F., *see* Figueiredo, R.A., (59) (2003) 218
Archbald, L.F., *see* Bartolome, J., (59) (2003) 1991
Archbald, L.F., *see* Phillips, T.C., (59) (2003) 1441
Armstrong, D.T., *see* Bagg, M.A., (59) (2003) 436
Armstrong, D.T., *see* Brevini, T.A.L., (59) (2003) 440
Armstrong, D.T., *see* Thomas, R.E., (59) (2003) 501
Artuso, J., *see* Salamone, D.F., (59) (2003) 285
Asari, M., *see* Kashiwazaki, N., (59) (2003) 423
Asher, G.W., *see* Berg, D.K., (59) (2003) 189
Ashman, R.J., *see* Grupen, C.G., (59) (2003) 447
Assumpcao, M.E.O.A., Nicacio, A.C., Mello, M.R.B., Oliveira, V.P., Lima, A.S., Magnusson, V., Tavares, L.M.T., Caetano, H.V.A. and Visintin, J.A., Comparison of survival of in vitro-derived bovine embryos cryopreserved by slow freezing, quick-freezing or vitrification methods, (59) (2003) 297
Assumpcao, M.E.O.A., *see* Lima, A.S., (59) (2003) 452
Aurich, C., *see* Handler, J., (59) (2003) 1381
Australia, *see* Curnow, E.C., (59) (2003) 363
Australia, *see* Hartwich, K.M., (59) (2003) 256
Avelino, K.B., Meirelles, F.V., Bertolla, R.P., LoTurco, E.G. and Garcia, J.M., Use of antioxidants in the in vitro maturation of bovine oocytes, (59) (2003) 483
Avery, B., *see* Boe-Hansen, G.B., (59) (2003) 439
Avery, B., *see* Gjorret, J.O., (59) (2003) 322
Avery, B., *see* Laurincik, J., (59) (2003) 426
Avery, B., Strøbech, L., Jacobsen, T., Bøgh, I.B. and Greve, T., In vitro maturation of bovine cumulus–oocyte complexes in undiluted follicular fluid: effect on nuclear maturation, pronucleus formation and embryo development, (59) (2003) 987
Ayres, S.L., *see* Behboodi, E., (59) (2003) 237
Azevedo, J.B., *see* Andrade, J.C.O., (59) (2003) 358
Azevedo, J.B., *see* Oliveira, D.F.F., (59) (2003) 375
Azevedo, J.B., *see* Taveiros, A.W., (59) (2003) 377

Båge, R.B, Petyim, S., Larsson, B., Hallap, T., Bergqvist, A.S., Gustafsson, H. and Rodríguez-Martínez, H., Oocyte quality in repeat-breeder dairy heifers and effects of OPU on reproductive performance, (59) (2003) 484
Bagg, M.A., *see* Brevini, T.A.L., (59) (2003) 440
Bagg, M.A., Vassena, R., Papasso-Brambilla, E., Grupen, C.G., Armstrong, D.T. and Gandol, F., The onset of puberty in pig immediately changes ovarian morphology but not oocyte in vitro developmental competence, (59) (2003) 436
Bai, X.J., *see* Dong, Y.J., (59) (2003) 246
Bailey, J.L., *see* Lessard, C., (59) (2003) 1865
Bakker, D., *see* Kruip, T.A.M., (59) (2003) 1651
Baldassarre, H., *see* Begin, I., (59) (2003) 1839

Baldassarre, H., *see* Keefer, C.L., (59) (2003) 263
Baldassarre, H., *see* Rao, K.M., (59) (2003) 538
Baldassarre, H., Wang, B., Kafidi, N., Gauthier, M., Neveu, N., Lapointe, J., Sneek, L., Leduc, M., Duguay, F., Zhou, J.F., Lazaris, A. and Karatzas, C.N., Production of transgenic goats by pronuclear microinjection of in vitro produced zygotes derived from oocytes recovered by laparoscopy, (59) (2003) 831
Baldassarre, H., Wang, B., Pierson, J., Neveu, N., Sneek, L., Lapointe, J., Cote, F., Kafidi, N., Keefer, C.L. and Karatzas, C.N., Early propagation of cloned goats by laparoscopic ovum pick-up and in vitro embryo production, (59) (2003) 236
Bali Papp, A., Ratky, J., Dohy, J. and Ivancsics, J., In vitro fertilization of porcine oocytes matured in presence of nerve growth factor, (59) (2003) 437
Bali Papp, A., *see* Nagy, E., (59) (2003) 494
Bali Papp, A., *see* Somfai, T., (59) (2003) 498
Ball, B.A., Gravance, C.G., Wessel, M.T. and Sabeur, K., Activity of angiotensin-converting enzyme (ACE) in reproductive tissues of the stallion and effects of angiotensin II on sperm motility, (59) (2003) 901
Banga-Mboko, H., *see* El Amiri, B., (59) (2003) 1291
Banu Ozdas, O., Pabuccuoglu, S. and Kamuran Ileri, I., Effects of different concentrations of potassium phosphate on the development of in vitro produced mouse embryos, (59) (2003) 457
Bao, S., Ushijima, H., Hirose, A., Aono, F., Ono, Y. and Kono, T., Development of bovine oocytes reconstructed with a nucleus from growing stage oocytes after fertilization in vitro, (59) (2003) 1231
Barañao, J.L., *see* Salamone, D.F., (59) (2003) 285
Barber, M., *see* Liu, J.-L., (59) (2003) 271
Bari, F., Khalid, M., Haresign, W., Murray, A. and Merrell, B., Factors affecting the survival of sheep embryos after transfer within a MOET program, (59) (2003) 1265
Baril, G., *see* Cognié, Y., (59) (2003) 171
Barna, J. and Wishart, G.J., Excess nuclear DNA in spermatozoa of guinea fowl, (59) (2003) 1685
Barreiro, R.G., Diaz, R.A. and Brogliatti, G.M., Ovarian response and transferable embryos from superovulated angus cows using Triub and estradiol benzoate, (59) (2003) 360
Barrio, M., *see* Peña, A.I., (59) (2003) 1725
Barros, C.M., Porto, L.P.C. and Nogueira, M.F.G., Dose–response trial in *Bos taurus* vs. *Bos indicus* cows superstimulated with FSH, associated with controlled LH surge and fixed-time artificial insemination, (59) (2003) 524
Barros, C.M., *see* Figueiredo, R.A., (59) (2003) 218
Barros, M.A.S.M., *see* Taveiros, A.W., (59) (2003) 377
Barry, D.M., Herhlodt, G., Visser, A., Hzimhanovich, B.B. and Godke, R.A., Development of mammalian embryos and stem cells at microgravity conditions at the international space station, (59) (2003) 337
Bartels, P., *see* Herrick, J.R., (59) (2003) 394
Bartels, P., *see* Vajta, G., (59) (2003) 291
Bartels, P., Spillings, B., Joubert, J., van Niekerk, M., Decuadro-Hansen, G. and Miller-Butterworth, C., Establishing viable cell cultures from african lions (*panthera leo*) following cryopreservation of skin biopsies in CBS straws, (59) (2003) 387
Bartolome, J., Hernandez, J., Sheerin, P., Luznar, S., Kelbert, D., Thatcher, W.W. and Archbald, L.F., Effect of pretreatment with bovine somatotropin (bST) and/or gonadotropin-releasing hormone (GnRH) on conception rate of dairy cows with ovarian cysts subjected to synchronization of ovulation and timed insemination, (59) (2003) 1991
Bartolomeu, C.C., *see* Andrade, J.C.O., (59) (2003) 358
Baruselli, P.S., Marques, M.O., Nasser, L.F., Reis, E.L. and Bo, G.A., Effect of eCG on pregnancy rates of lactating Zebu beef cows treated with CIDR-B devices for timed artificial insemination, (59) (2003) 214
Baruselli, P.S., *see* Marques, M.O., (59) (2003) 369
Baruselli, P.S., *see* Nasser, L.F., (59) (2003) 530
Bass, L.D., *see* Maclellan, L.J., (59) (2003) 306
Batchelder, C.A., *see* Bertolini, M., (59) (2003) 416
Bavister, B., *see* Wirtu, G., (59) (2003) 354
Beaumont, S.E., *see* Berg, D.K., (59) (2003) 406
Beckers, J.-F.V., *see* de Sousa, N.M., (59) (2003) 1131
Beckers, J.-F.V., *see* El Amiri, B., (59) (2003) 1291
Beckers, J.-F.V., *see* Karen, A., (59) (2003) 1941
Beebe, D.J., *see* Clark, S.G., (59) (2003) 441
Beebe, D.J., *see* Walters, E.M., (59) (2003) 353
Beever, D.E., *see* Taylor, V.J., (59) (2003) 1661
Beg, M.A., *see* Bergfelt, D.R., (59) (2003) 1811
Begin, I., Bhatia, B., Baldassarre, H., Dinnyes, A. and Keefer, C.L., Cryopreservation of goat oocytes and in vivo derived 2- to 4-cell embryos using the cryoloop (CLV) and solid-surface vitrification (SSV) methods, (59) (2003) 1839
Begin, I., *see* Keefer, C.L., (59) (2003) 263

Behboodi, E., Memili, E., Ayres, S.L., O'Coin, M., Chen, L.H., Meade, H.M. and Echelard, Y., Application of embryo cloning to the generation of transgenic founder goats, (59) (2003) 237
Behboodi, E., *see* Memili, E., (59) (2003) 274
Bello, A.C., *see* Taveiros, A.W., (59) (2003) 377
Belluzzi, S., *see* Mari, G., (59) (2003) 529
Berg, D.K. and Asher, G.W., New developments reproductive technologies in deer, (59) (2003) 189
Berg, D.K., Beaumont, S.E., Berg, M.C., Hull, C.D. and Tervit, H.R., Oxygen and carbon dioxide tension in days 14–15 dominant bovine follicles measured in vivo or 4 hours post-mortem, (59) (2003) 406
Berg, M., *see* Morrow, C.J., (59) (2003) 539
Berg, M.C., *see* Berg, D.K., (59) (2003) 406
Berg, M.C., *see* Wells, D.N., (59) (2003) 45
Bergfelt, D.R., Sego, L.H., Beg, M.A. and Ginther, O.J., Calculated follicle deviation using segmented regression for modeling diameter differences in cattle, (59) (2003) 1811
Bergqvist, A.-S. and Rodriguez-Martinez, H., Distribution of hyaluronan in the bovine oviduct, (59) (2003) 467
Bergqvist, A.S., *see* Båge, R.B, (59) (2003) 484
Berlinguer, F., *see* Ledda, S., (59) (2003) 326
Berlinguer, F., *see* Leoni, G., (59) (2003) 492
Bernal, D., *see* Lucena, E., (59) (2003) 272
Bertolini, M., Mason, J.B., Batchelder, C.A., Hoffert, K.A. and Anderson, G.B., Relative pattern of gene expression in placental and fetal tissues by in vivo- and in vitro-produced Day-90 and Day-180 bovine concepti, (59) (2003) 416
Bertolla, R.P., *see* Avelino, K.B., (59) (2003) 483
Bertschinger, H.J., *see* Irons, P.C., (59) (2003) 222
Besenfelder, U., *see* Mosslacher, G., (59) (2003) 372
Betancourt, M., *see* Jiménez, I., (59) (2003) 1171
Betts, D.H., *see* Alexander, B., (59) (2003) 233
Betts, D.H., *see* Rho, G.J., (59) (2003) 282
Bevers, M., *see* Kidson, A., (59) (2003) 1889
Bevers, M.M., *see* Fatehi, A.N., (59) (2003) 444
Bevers, M.M., *see* Kidson, A., (59) (2003) 210
Bevers, M.M., *see* Schoevers, E.J., (59) (2003) 2017
Beyhan, Z., *see* Lee, H.J., (59) (2003) 270
Bøgh, I.B., *see* Avery, B., (59) (2003) 987
Bhak, J.S., *see* Cho, S.K., (59) (2003) 518
Bhak, J.S., *see* Yin, X.J., (59) (2003) 294
Bhatia, B., *see* Begin, I., (59) (2003) 1839
Bhatia, B., *see* Keefer, C.L., (59) (2003) 263
Bhuiyan, M.M.U., *see* Cho, J.K., (59) (2003) 242
Bhuiyan, M.M.U., *see* Jang, G., (59) (2003) 252
Bianchini, S., *see* Andrade, J.C.O., (59) (2003) 358
Bielanski, A., Ghazi, D.F. and Phipps-Todd, B., *Trichomonas fetus* in in vitro fertilization system, (59) (2003) 381
Bielanski, A., *see* Tsuboi, T., (59) (2003) 385
Bielefeldt-Ohmann, H., *see* McGowan, M.R., (59) (2003) 1051
Bijma, P., *see* van Arendonk, J.A.M., (59) (2003) 635
Bilbao, A., *see* Fernandez-Gonzalez, R., (59) (2003) 320
Bilby, C.R., *see* Hasler, J.F., (59) (2003) 1919
Bilkei, G., *see* Horvat, G., (59) (2003) 1479
Billah, A.M., *see* Morfeld, K.A., (59) (2003) 400
Bilodeau, A.S., *see* Keefer, C.L., (59) (2003) 263
Bilodeau, J.F., *see* Ali, A.A., (59) (2003) 939
Bilodeau, J.-F.V., *see* Lessard, C., (59) (2003) 1865
Bilski, J.J., *see* Grazul-Bilska, A.T., (59) (2003) 1449
Binelli, M., *see* Seneda, M.M., (59) (2003) 1435
Bing, Y.Z., Che, L.M., Hirao, Y., Takenouchi, N., Kuwayama, M. and Nagai, T., Effects of calcium in the medium on the activation of porcine oocytes after the puncture using piezo-electric elements, (59) (2003) 470
Bing, Y.Z., Hirao, Y., Takenouchi, N., Che, L.M., Nakamura, H., Yodoi, J. and Nagai, T., Effects of thioredoxin on the preimplantation development of bovine embryos, (59) (2003) 863
Biology, Cellular, *see* Rodriguez, C., (59) (2003) 478
Bjerregaard, B., *see* Faerge, I., (59) (2003) 487
Bjerrregaard, B., Laurincik, J., Strejcek, F., Schellander, K., Rosenkranz, C., Rath, D., Niemann, H. and Maddox-Hyttel, P., Nucleolar proteins and ultrastructure in early porcine embryos produced in vitro, (59) (2003) 438
Blanchard, T.L., *see* Brinsko, S.P., (59) (2003) 735
Blanchard, T.L., *see* Brinsko, S.P., (59) (2003) 1001
Blash, S., *see* Melican, D., (59) (2003) 455
Blesbois, E., *see* Douard, V., (59) (2003) 753
Blesbois, E., *see* Saint Jalme, M., (59) (2003) 875
Blomberg, L.A., *see* Zuelke, K., (59) (2003) 435
Blottner, S., *see* Goeritz, F., (59) (2003) 1487
Blum, J.W., *see* Reist, M., (59) (2003) 1707
Bo, G.A., *see* Baruselli, P.S., (59) (2003) 214
Bo, G.A., *see* Cutaia, L., (59) (2003) 216
Bo, G.A., *see* Marques, M.O., (59) (2003) 369
Bo, G.A., *see* Moreno, D., (59) (2003) 370
Bo, G.A., *see* Nasser, L.F., (59) (2003) 530
Boe-Hansen, G.B., Avery, B., Christensen, P., Lehn-Jensen, H. and Greve, T., Sperm chromatin structure and IVF in bulls with low fertility in vivo, (59) (2003) 439
Boerjan, M.L., *see* Yuan, Y.Q., (59) (2003) 1585

Bogh, I.B., Schmidt, M., Pedersen, H.G., Jensen, A.L. and Greve, T., Preliminary results of biochemical composition of bovine allantoic fluid aspirated repeatedly under transvaginal ultrasound-guidance, (59) (2003) 238
Bogliolo, L., *see* Ledda, S., (59) (2003) 326
Bogliolo, L., *see* Leoni, G., (59) (2003) 492
Bogor, *see* Curnow, E.C., (59) (2003) 363
Boixo, J.C., *see* Martinez-Pastor, F., (59) (2003) 397
Boixo, J.C., *see* Rodriguez, C., (59) (2003) 478
Boland, M.P., *see* Lonergan, P., (59) (2003) 493
Boland, M.P., *see* Papadopoulos, S., (59) (2003) 458
Boland, M.P., *see* Rizos, D., (59) (2003) 350
Boland, M.P., *see* Ward, F., (59) (2003) 1575
Bolling, L., *see* Sarmento, O., (59) (2003) 330
Boly, H., *see* de Sousa, N.M., (59) (2003) 1131
BonDurant, R., *see* Fieni, F., (59) (2003) 1515
Bordignon, V. *see* Bureau, W. (59) (2003) 239
Bormann, C.L., Enright, B.P. and Yang, X., Increased parthenogenetic development of bovine oocytes activated with a combined phosphorylation and protein synthesis inhibitor, (59) (2003) 471
Bormann, C.L., Ongeri, E. Moige and Krisher, R.L., The effect of vitamins during maturation of caprine oocytes on subsequent developmental potential in vitro, (59) (2003) 1373
Borque, C., *see* Palasz, A.T., (59) (2003) 402
Borragan, S., *see* Anel, L., (59) (2003) 386
Borragan, S., *see* Martinez-Pastor, F., (59) (2003) 397
Bosch, P., *see* Sirisathien, S., (59) (2003) 1751
Bosch, P., *see* Sirisathien, S., (59) (2003) 1827
Boshoff, I.J., *see* Herrick, J.R., (59) (2003) 394
Boshoff, K., *see* Jooste, F., (59) (2003) 443
Botero, F., *see* Lucena, E., (59) (2003) 272
Bouwman, E.G., *see* Langendijk, P., (59) (2003) 849
Bowers, S., *see* Willard, S., (59) (2003) 1799
Boykin, D.W., *see* Givens, M.D., (59) (2003) 382
Brackett, B.G., *see* Sirisathien, S., (59) (2003) 1751
Brazil, *see* Adona, P.R., (59) (2003) 479
Brazil, *see* Adona, P.R., (59) (2003) 479
Brazil, *see* Meo, S.C., (59) (2003) 476
Breckenridge, A., Successful clinical management of repeat superstimulated Brahman donors exhibiting chronic cystic ovarian degeneration, (59) (2003) 525
Brem, G., *see* Hiendleder, S., (59) (2003) 257
Brem, G., *see* Kühholzer-Cabot, B., (59) (2003) 265
Brem, G., *see* Mosslacher, G., (59) (2003) 372
Brevini, T.A.L., Francisci, C., Vassena, R., Bagg, M.A., Grupen, C.G., Armstrong, D.T. and Gandol, F., Follicular fluid concentration during pig IVM affects oocyte parthenogenetic development and mitochondria distribution, (59) (2003) 440
Brink, Z., *see* Flint, A., (59) (2003) 507
Brink, Z., *see* Seidel, Jr., G.E., (59) (2003) 515
Brink, Z., *see* Tubman, L.M., (59) (2003) 517
Brinsko, S.P., Blanchard, T.L., Rigby, S.L., Love, C.C. and Varner, D.D., Effects of dead spermatozoa on motion characteristics and membrane integrity of live spermatozoa in fresh and cooled-stored equine semen, (59) (2003) 735
Brinsko, S.P., Rigby, S.L., Lindsey, A.C., Blanchard, T.L., Love, C.C. and Varner, D.D., Pregnancy rates in mares following hysteroscopic or transrectally-guided insemination with low sperm numbers at the utero-tubal papilla, (59) (2003) 1001
Brochard, V., *see* Zhou, Q., (59) (2003) 296
Brockway, A., Shaw, J., Lewis, I. and Macmillan, K., The influence of direct solar radiation on skin, scrotal and deep body temperatures in holstein bulls, (59) (2003) 460
Brogliatti, G.M., *see* Barreiro, R.G., (59) (2003) 360
Broich, A., *see* Goeritz, F., (59) (2003) 1487
Bruemmer, J.E., *see* Squires, E.L., (59) (2003) 151
Brüggerhoff, K., *see* Hiendleder, S., (59) (2003) 257
Bruyas, J.-F., *see* Moussa, M., (59) (2003) 373
Bruyas, J.-F., *see* Moussa, M., (59) (2003) 1615
Bryant, M.J., *see* Taylor, V.J., (59) (2003) 1661
Bugno, M., Klukowska, J., Sl|ota, E., Tischner, M. and Świtoński, M., A sporadic case of the sex-reversed mare (64,XY; SRY-negative): molecular and cytogenetic studies of the Y chromosome, (59) (2003) 1597
Bui, L.C., *see* Duc, N.H., (59) (2003) 442
Bui, L.C., *see* Hanh, N.V., (59) (2003) 488
Bui, L.C., *see* Ty, L.V., (59) (2003) 290
Bureau, W., Bordignon, V., Leveillee, C., Smith, L. and King, A., Sex-chromosomal complement of donor cells and reconstructed embryos derived from them, (59) (2003) 239
Burucoa, C., *see* Fieni, F., (59) (2003) 1515
Bussmann, L., *see* Salamone, D.F., (59) (2003) 285
Butler, R., *see* Gavin, W., (59) (2003) 254
Butler, R.E., Melican, D., Hawkins, N., Chen, L., Hayden, E., Picarella, M. and Gavin, W., Production of transgenic goats by somatic cell nuclear transfer using transfected goat adult skin cells, (59) (2003) 240

Caamano, J.N., *see* Day, B.N., (59) (2003) 213
Caamano, J.N., Wu, G.M., McCauley, T.C., Rieke, A.R., Cantley, T.C., Mao, J., Didion, B.A., Prather, R.S., Martinez, E.A. and Day, B.N.,

Non-surgical embryo transfer in swine: preliminary results, (59) (2003) 361
Caballero, J., *see* Panarace, M., (59) (2003) 513
Cabodevila, J., *see* Ferré, L.B., (59) (2003) 301
Caccia, M., *see* Moreno, D., (59) (2003) 370
Caetano, H.V.A., *see* Assumpcao, M.E.O.A., (59) (2003) 297
Cain, D., *see* Hill, J., (59) (2003) 258
Callesen, H., *see* Lopes, A.S., (59) (2003) 345
Callesen, H., *see* Vajta, G., (59) (2003) 291
Callesen, H., *see* Wrenzycki, C., (59) (2003) 504
Camargo, L.S.A., Sa, W.F., Viana, J.H.M., Ferreira, A.M., Ramos, A.A., Gilardi, S.G.T. and Vale Filho, V.R., Effect of citrate and taurine on bovine embryo development in different culture medium under 5% CO_2 in humidified air, (59) (2003) 338
Camargo, L.S.A., *see* Viana, J.H.M., (59) (2003) 415
Camargo, L.S.A., *see* Vireque, A.A., (59) (2003) 503
Campanile, G., *see* Neglia, G., (59) (2003) 374
Campanile, G., *see* Neglia, G., (59) (2003) 1123
Campbell, K.H.S., *see* Alberio, R., (59) (2003) 318
Campos-Chillon, L.F. and de la Torre, J.F., Effect of concentration of sexed bovine sperm sorted at 40 and 50 psi on developmental capacity of in vitro produced embryos, (59) (2003) 506
Campos-Chillon, L.F., *see* De La Torre-Sanchez, J.F., (59) (2003) 339
Cantley, T.C., *see* Caamano, J.N., (59) (2003) 361
Cantley, T.C., *see* Mao, J., (59) (2003) 410
Cappai, P., *see* Isachenko, V., (59) (2003) 1209
Caracciolo di Brienza, V., *see* Neglia, G., (59) (2003) 1123
CaracciolodiBrienza, V., *see* Neglia, G., (59) (2003) 374
Cardoso, R.C.S., *see* Silva, A.R., (59) (2003) 821
Cardoso, R.d.C.S., Silva, A.R., Uchoa, D.C. and da Silva, L.D.M., Cryopreservation of canine semen using a coconut water extender with egg yolk and three different glycerol concentrations, (59) (2003) 743
Carneiro, G.F. and Liu, I.K.M., Temporal effect of IGF-I on nuclear and cytoplasmic maturations in equine oocytes, (59) (2003) 485
Carnevale, E.M., Maclellan, L.J., Coutinho da Silva, M., Preis, K.A. and Squires, E.L., Pregnancies obtained after collection and transfer of oocytes from ovaries of euthanized mares, (59) (2003) 362
Carnevale, E.M., *see* Squires, E.L., (59) (2003) 151
Carson, R.L., *see* Givens, M.D., (59) (2003) 382
Carter, D.B., *see* Prather, R.S., (59) (2003) 115
Carvajal, G., *see* Cremades, T., (59) (2003) 298
Casero, R., *see* Mari, G., (59) (2003) 529
Cattaneo, L., *see* Panarace, M., (59) (2003) 513
Cavalcanti Neto, C.C., *see* Oliveira, D.F.F., (59) (2003) 375
Cavestany, D., Meikle, A., Kindahl, H., Van Lier, E., Moreira, F., Thatcher, W.W. and Forsberg, M., Use of medroxyprogesterone acetate (MAP) in lactating Holstein cows within an Ovsynch protocol: follicular growth and hormonal patterns, (59) (2003) 1787
Celada, M., *see* Anel, L., (59) (2003) 386
Cerrate, H., *see* Panarace, M., (59) (2003) 513
Cervera, R.P., *see* Silvestre, M.A., (59) (2003) 1469
Cetica, P.D., *see* Sutton, M.L., (59) (2003) 500
Chadio, S., *see* Menegatos, J., (59) (2003) 1533
Chamorro, C., *see* Martinez-Pastor, F., (59) (2003) 397
Chamorro, C., *see* Rodriguez, C., (59) (2003) 478
Chamorro, C.A., *see* Paz, P., (59) (2003) 228
Chang, C.C., *see* Shen, P.C., (59) (2003) 289
Chang, D.W., *see* Lee, Y.W., (59) (2003) 396
Chang, K.H., *see* Cho, J.K., (59) (2003) 242
Chang, W.C., Rudiger, S.R., Walker, S.K., Hamilton, H.M., Hartwich, K.M. and Peura, T.T., Effect of treatment of somatic cells with aphidicolin on the in vitro development of cloned sheep embryos, (59) (2003) 241
Chang, W.K., *see* Seong, H.H., (59) (2003) 336
Chang, W.-K., *see* Yang, B.-C., (59) (2003) 317
Chang, Y.M., *see* Seong, H.H., (59) (2003) 336
Chaubal, S.A., *see* Nedambale, T.L., (59) (2003) 307
Chaves, M.G., *see* Neild, D.M., (59) (2003) 1693
Che, L.M., *see* Bing, Y.Z., (59) (2003) 470
Che, L.M., *see* Bing, Y.Z., (59) (2003) 863
Checura, C.M. and Seidel Jr., G.E., Effect of macromolecules for bovine oocyte vitrification, (59) (2003) 207
Chen, L., *see* Butler, R.E., (59) (2003) 240
Chen, L.H., *see* Behboodi, E., (59) (2003) 237
Chen, L.H., *see* Destrempes, M.M., (59) (2003) 245
Chen, L.H., *see* Gavin, W., (59) (2003) 254
Chen, L.R., *see* Shen, P.C., (59) (2003) 289
Chen, L.R., *see* Shiue, Y.L., (59) (2003) 380
Chen, N.Q., Yip, W.Y., Tan, L.G., Liow, S.L. and Ng, S.C., Influence of multiple electrical pulses on parthenogenetic activation and subsequent in vitro development of mouse oocytes, (59) (2003) 472
Cheng, W.T.K., *see* Shen, P.C., (59) (2003) 289
Cheong, H.-T., *see* Choi, J.-Y., (59) (2003) 244

Cheong, H.T., *see* Hwang, I.S., (59) (2003) 461
Chesne, P., *see* Apimeteetumrong, M., (59) (2003) 235
Chesta, P., *see* Moreno, D., (59) (2003) 370
Chian, R.C., *see* Rezaei, N., (59) (2003) 497
Cho, H.Y., *see* Cho, S.K., (59) (2003) 518
Cho, H.Y., *see* Yin, X.J., (59) (2003) 294
Cho, J.K., Bhuiyan, M.M.U., Park, E.S., Jang, G., Chang, K.H., Park, H.J., Kang, S.K., Lim, J.M., Lee, B.C. and Hwang, W.S., Production of bovine transgenic cloned embryos using prourokinase-transfected somatic cells:effect of type and size of donor cells, (59) (2003) 242
Cho, J.K., *see* Jang, G., (59) (2003) 252
Cho, S.K., *see* Yin, X.J., (59) (2003) 294
Cho, S.K., Yin, X.J., Park, M.R., Cho, H.Y., Im, Y.J., Park, J.J., Bhak, J.S. and Kim, J.H., Effect of electrical activation on embryonic development following intracytoplasmic sperm injection (ICSI) in pig, (59) (2003) 518
Cho, S.R., Rho, G.J., Lee, H.J. and Choe, S.Y., Development of nuclear transfer bovine embryos derived from fetal fibroblasts, (59) (2003) 243
Choe, S.Y., *see* Cho, S.R., (59) (2003) 243
Choe, S.Y., *see* Ock, S.A., (59) (2003) 464
Choi, J.T., *see* Grazul-Bilska, A.T., (59) (2003) 1449
Choi, J.-Y., Kim, C.-I., Park, C.-K., Yang, B.-K. and Cheong, H.-T., Effect of activation time on the nuclear remodeling and in vitro development of nuclear transfer embryos derived from bovine somatic cells, (59) (2003) 244
Choi, S.H., *see* Seong, H.H., (59) (2003) 336
Choi, W.I., *see* Lee, Y.W., (59) (2003) 396
Choi, Y.-H., Love, C.C., Varner, D.D., Love, L.B. and Hinrichs, K., Effects of gas conditions, time of medium change, and ratio of medium to embryo on in vitro development of horse oocytes fertilized by intracytoplasmic sperm injection, (59) (2003) 1219
Choi, Y.H., *see* Love, L.B., (59) (2003) 765
Christensen, P., *see* Boe-Hansen, G.B., (59) (2003) 439
Chu, F.H., *see* Shen, P.C., (59) (2003) 289
Chung, J.T., *see* Rezaei, N., (59) (2003) 497
Cllera, J., *see* Picazo, R.A., (59) (2003) 412
Claire Wathes, D., *see* Taylor, V.J., (59) (2003) 1661
Clark, S.G., *see* Walters, E.M., (59) (2003) 353
Clark, S.G., Walters, M., Beebe, D.J. and Wheeler, M.B., A. Novel integrated in vitro maturation and in vitro fertilization system for swine, (59) (2003) 441
Clayton, *see* Curnow, E.C., (59) (2003) 363
Cleary, M., *see* West, M., (59) (2003) 405
Cleary, M., West, M., Shaw, J., Jenkin, G. and Trounson, A., In vitro maturation of oocytes collected from non-stimulated common wombats (*Vombatus ursinus*), (59) (2003) 388
Cocero, M.J., *see* Alabart, J.L., (59) (2003) 1345
Cocero, M.J., *see* Isachenko, V., (59) (2003) 1209
Cockrem, K., *see* Wells, D.N., (59) (2003) 45
Cognié, Y., Baril, G., Poulin, N. and Mermillod, P., Current status of embryo technologies in sheep and goat, (59) (2003) 171
Cognie, Y., *see* King, W.A., (59) (2003) 451
Colazo, M.G., Gavaga, Q.A., Kastelic, J.P. and Mapletoft, R.J., The effects of estradiol cypionate at CIDR removal and interval to fixed-time AI on pregnancy rates in beef cattle, (59) (2003) 215
Colazo, M.G., *see* Gavaga, Q.A., (59) (2003) 221
Colazo, M.G., *see* Kastelic, J.P., (59) (2003) 223
Colazo, M.G., *see* Martínez, M.F., (59) (2003) 224
Cole, A., *see* Damiani, P., (59) (2003) 390
Colenbrander, B., *see* Fatehi, A.N., (59) (2003) 444
Colenbrander, B., *see* Kidson, A., (59) (2003) 210
Colenbrander, B., *see* Kidson, A., (59) (2003) 1889
Colenbrander, B., *see* Neild, D.M., (59) (2003) 1693
Colleoni, S., *see* Galli, C., (59) (2003) 599
Colleoni, S., *see* Lagutina, I., (59) (2003) 269
Collier, R.J., *see* Hasler, J.F., (59) (2003) 1919
Collins, M.G., *see* Landry, A.M., (59) (2003) 355
Conover, M.R., Impact of consuming tall fescue seeds infected with the endophytic fungus, *Neotyphodium coenophialum*, on reproduction of chickens, (59) (2003) 1313
Contreras, I., *see* Paz, P., (59) (2003) 228
Coonrod, S., *see* Sarmento, O., (59) (2003) 330
Cooper, D., *see* Herold, F.C., (59) (2003) 393
Coopman, F.O.J., *see* Yuan, Y.Q., (59) (2003) 1585
Costa Pereira, D., *see* Dode, M.A.N., (59) (2003) 340
Cote, F., *see* Baldassarre, H., (59) (2003) 236
Cote, F., *see* Rao, K.M., (59) (2003) 538
Coutinho da Silva, M., *see* Carnevale, E.M., (59) (2003) 362
Coy, P., *see* Garcia, E., (59) (2003) 519
Coy, P., *see* Romar, R., (59) (2003) 975
Cremades, T., Carvajal, G., Vazquez, J.M., Lucas, X., Martinez, E.A. and Roca, J., Changes in motion parameters and subpopulation distribution of boar spermatozoa during the cryopreservation process, (59) (2003) 298
Crichton, E.G., Obringer, A., Lund, A., Kirchner, E., Pryor, W. and Loskutoff, N.M., Monitoring

reproductive activity in the Tasmanian devil (*Sarcophilus harrisii*), (59) (2003) 389
Crichton, E.G., *see* Loskutoff, N.M., (59) (2003) 384
Cripps, P.J., *see* Gouletsou, P.G., (59) (2003) 1959
Crotti, G., *see* Galli, C., (59) (2003) 599
Crotti, G., *see* Lagutina, I., (59) (2003) 269
Cseh, S., *see* Pribenszky, C., (59) (2003) 309
Cseh, S., *see* Pribenszky, C., (59) (2003) 329
Curnow, E.C., Hendriana, Y. and Hayes, E.S., Vaginal cytology for detection of ovulation in *macaca fascicul* (59) (2003) 363
Curnow, E.C., *see* Hayes, E.S., (59) (2003) 365
Cutaia, L., *see* Moreno, D., (59) (2003) 370
Cutaia, L., Tribulo, R., Moreno, D. and Bo, G.A., Effect of ECG treatment in postpartum beef cows synchronized with progesterone vaginal devices and estradiol benzoate and inseminated at a fixed-time, (59) (2003) 216

da Silva, L.D.M., *see* Cardoso, R.d.C.S., (59) (2003) 743
Daels, P.F., *see* Moussa, M., (59) (2003) 373
Daels, P.F., *see* Moussa, M., (59) (2003) 1615
Dahlen, C.R., Lamb, G.C., Zehnder, C.M., Miller, L.R. and DiCostanzo, A., Fixed-time insemination in peripuberal, lightweight replacement beef heifers after estrus synchronization with PGF2alpha and GnRH, (59) (2003) 1827
Dale, B., *see* Wilding, M., (59) (2003) 466
Dalla Lasta, M., *see* Panarace, M., (59) (2003) 513
Damiani, P., *see* Wirtu, G., (59) (2003) 354
Damiani, P., Wirtu, G., Miller, F., Cole, A., Pope, C., Godke, R.A. and Dresser, B.L., Development of Giant eland antelope (*taurotragus derbianus*) embryos following nuclear transfer with Common eland (*taurotragus oryx*) and bovine (*bos taurus*) oocytes, (59) (2003) 390
Danda, E.P.N., *see* Andrade, J.C.O., (59) (2003) 358
Dattena, M., *see* Isachenko, V., (59) (2003) 1209
Day, B.N., Mathias, K., Didion, B.A., Martinez, E.A. and Caamano, J.N., Deep intrauterine insemination in sows: first field trial in a USA commercial farm with a newly developed device, (59) (2003) 213
Day, B.N., *see* Caamano, J.N., (59) (2003) 361
Day, B.N., *see* Mao, J., (59) (2003) 410
de Figueiredo, J.R., *see* de Sousa, N.M., (59) (2003) 1131
de Haas, K., *see* Gerber, D., (59) (2003) 392
de Haas, K., *see* Herold, F.C., (59) (2003) 393
de Haas, K., *see* Jooste, F., (59) (2003) 443
De Jarnette, M., *see* Garcia, A., (59) (2003) 219
de Kruif, A., *see* De Pauw, I.M.C., (59) (2003) 1093
de Kruif, A., *see* De Pauw, I.M.C., (59) (2003) 1109
de Kruif, A., *see* Van Soom, A., (59) (2003) 352
de Kruif, A., *see* Verberckmoes, S., (59) (2003) 231
de Kruif, A., *see* Yuan, Y.Q., (59) (2003) 1585
De la Fuente, J., *see* Jimenez, A., (59) (2003) 509
de la Fuente, J., *see* Lonergan, P., (59) (2003) 493
De la Fuente, J., *see* Palasz, A.T., (59) (2003) 402
de la Fuente, J., *see* Rizos, D., (59) (2003) 350
de la Torre, J.F., *see* Campos-Chillon, L.F., (59) (2003) 506
De La Torre-Sanchez, J.F. and Campos-Chillon, L.F., Effect of pyrroline-5-carboxylate and glucose on post-compaction development of in vitro produced bovine embryos, (59) (2003) 339
de Matos, D.G., *see* Gasparrini, B., (59) (2003) 321
De Pauw, I., *see* Verberckmoes, S., (59) (2003) 231
De Pauw, I.M.C., Van Soom, A., Maes, D., Verberckmoes, S. and de Kruif, A., Effect of sperm coating on the survival and penetrating ability of in vitro stored bovine spermatozoa, (59) (2003) 1109
De Pauw, I.M.C., Van Soom, A., Mintiens, K., Verberckmoes, S. and de Kruif, A., In vitro survival of bovine spermatozoa stored at room temperature under epididymal conditions, (59) (2003) 1093
de Roos, A.P.W., *see* Merton, J.S., (59) (2003) 651
de Ruigh, L., *see* Merton, J.S., (59) (2003) 346
de Ruigh, L., *see* Merton, J.S., (59) (2003) 651
de Sousa, N.M., *see* Karen, A., (59) (2003) 1941
de Sousa, N.M., Zongo, M., Pitala, W., Boly, H., Sawadogo, L., Sanon, M., de Figueiredo, J.R., Gonçalves, P.B.D., El Amiri, B., Perènyi, Z. and Beckers, J.-F.V., Pregnancy-associated glycoprotein concentrations during pregnancy and the postpartum period in Azawak Zebu cattle, (59) (2003) 1131
De Sousa, P.A., *see* Gao, S., (59) (2003) 253
de Valladolid, Diputacion, *see* Rodriguez, C., (59) (2003) 478
Dean, W., *see* Reik, W., (59) (2003) 21
Decuadro-Hansen, G., *see* Bartels, P., (59) (2003) 387
DeGrofft, D.L., *see* Schenk, J.L., (59) (2003) 514
Dehnad, H., *see* Fatehi, A.N., (59) (2003) 444
Delclaux, M., *see* Palasz, A.T., (59) (2003) 402
Deligiannis, K., *see* Gouletsou, P.G., (59) (2003) 1959
Denham, S.C., *see* Hasler, J.F., (59) (2003) 1919
Denniston, R.S., *see* Landry, A.M., (59) (2003) 355
Denniston, R.S., *see* Sansinena, M., (59) (2003) 287
Desbuleux, H., *see* El Amiri, B., (59) (2003) 1291

Destrempes, M.M., Rapiejko, K.T., Williams, J.L., Chen, L.H., Hayden, E., Liem, H., Picarella Stein, M., Shen, M.F., Meade, H.M. and Echelard, Y., Screening transgenic primary cell lines prior to use for somatic cell nuclear transfer, (59) (2003) 245
Dewulf, J., *see* Verberckmoes, S., (59) (2003) 231
Dharmarajan, A., *see* Junk, S.M., (59) (2003) 1741
Di Palo, R., *see* Neglia, G., (59) (2003) 374
Di Palo, R., *see* Neglia, G., (59) (2003) 1123
Diamond, J., *see* Lavoir, M.-C., (59) (2003) 379
Diaz, A., Martinez-Pastor, F., Alvarez, M., Anel, L., Rodriguez, C., Kaabi, M. and Paz, P., Assessment of mitochondrial activity in ram semen through staining with the fluorescent probe JC-1, (59) (2003) 217
Diaz, A., *see* Martinez-Pastor, F., (59) (2003) 397
Diaz, R.A., *see* Barreiro, R.G., (59) (2003) 360
Díaz, E., *see* Duque, P., (59) (2003) 889
DiCostanzo, A., *see* Dahlen, C.R., (59) (2003) 1827
Didion, B.A., *see* Caamano, J.N., (59) (2003) 361
Didion, B.A., *see* Day, B.N., (59) (2003) 213
Didion, B.A., *see* Mao, J., (59) (2003) 410
Dieleman, S.J., *see* Knijn, H.M., (59) (2003) 325
Dieleman, S.J., *see* Merton, J.S., (59) (2003) 651
Dieleman, S.J., *see* Vos, P.L.A.M., (59) (2003) 332
Díez, C., *see* Duque, P., (59) (2003) 889
Diez, C., Duque, P., Hidalgo, C.O., Facal, N. and Gomez, E., Bovine oocytes matured in vitro with retinoic acid and ethanol become blastocysts with altered differential cell counts, (59) (2003) 486
Diez, C., *see* Duque, P., (59) (2003) 341
Diez, C., *see* Hidalgo, C.O., (59) (2003) 366
Diez, C., *see* Royo, L.J., (59) (2003) 431
Dindot, S.V., Hansen, G., Romano, J. and Piedrahita, J.A., Genomic imprinting of the bovine Igf2, Gtl2 and Xist loci, (59) (2003) 417
Dinnyes, A., Kikuchi, K., Watanabe, A., Fuchimoto, D., Iwamoto, M., Kaneko, H., Noguchi, J., Somfai, T., Onishi, A. and Nagai, T., Successful cryopreservation of in vitro-produced pig embryos by the solid surface vitrification (SSV) method, (59) (2003) 299
Dinnyes, A., *see* Begin, I., (59) (2003) 1839
Dinnyes, A., *see* Lee, J.-W., (59) (2003) 305
Dinnyes, A., *see* Nedambale, T.L., (59) (2003) 307
Döbeli, M., *see* Nöthling, J.O., (59) (2003) 1929
Dobrinski, I., *see* Honaramooz, A., (59) (2003) 536
Dobrinsky, J.R., *see* Kidson, A., (59) (2003) 210
Dobson, H., *see* Martin Sheldon, I. (59) (2003) 1357
Dochi, O., *see* Aoki, S., (59) (2003) 234
Dochi, O., *see* Kitamura, S., (59) (2003) 367
Dochi, O., *see* Narita, M., (59) (2003) 328
Dochi, O., *see* Nishisouzu, T., (59) (2003) 531
Dode, M.A.N., Costa Pereira, D. and Rumpf, R., Evaluation of different methods for in vitro culture of a single bovine embryo, (59) (2003) 340
Dohy, J., *see* Bali Papp, A., (59) (2003) 437
Dohy, J., *see* Nagy, E., (59) (2003) 494
Dominguez, M., *see* Singh, J., (59) (2003) 534
Dong, Y.J., Bai, X.J., Varisanga, M.D., Matango, N.R. and Suzuki, T., Production of cloned calves following nuclear transfer with cultured frozen–thawed somatic cells using simple portable C_2O incubator, (59) (2003) 246
Dong, Y.J., *see* Mtango, N.R., (59) (2003) 1393
Donnay, I., *see* Gasparrini, B., (59) (2003) 321
Donovan, A., *see* Papadopoulos, S., (59) (2003) 458
dos Goytacazes, Campos, *see* Meo, S.C., (59) (2003) 476
dos Goytacazes-RJ, Campos, *see* Adona, P.R., (59) (2003) 479
Douard, V., Hermier, D., Magistrini, M. and Blesbois, E., Reproductive period affects lipid composition and quality of fresh and stored spermatozoa in Turkeys, (59) (2003) 753
Dresser, B., *see* Wirtu, G., (59) (2003) 354
Dresser, B.L., *see* Damiani, P., (59) (2003) 390
Dresser, B.L., *see* Harris, R.F., (59) (2003) 448
Dresser, B.L., *see* Pope, C.E., (59) (2003) 308
Drillich, M., Pfützner, A., Sabin, H.-J., Sabin, M. and Heuwieser, W., Comparison of two protocols for the treatment of retained fetal membranes in dairy cattle, (59) (2003) 951
Druery, G.V., Shimmin, G.A., Taggart, D.A., Temple-Smith, P.D., MacDonald, C., Finlayson, G.R. and Paris, M.C.J., Ovarian follicular superstimulation in the southern hairy-nosed wombat, *Lasiorhinus latifrons*, (59) (2003) 391
Du, F., *see* Liu, J.-L., (59) (2003) 271
Du, F., *see* Nedambale, T.L., (59) (2003) 307
Du, F., *see* Sung, L., (59) (2003) 465
Du, F., *see* Xu, J., (59) (2003) 505
Du, F., Sung, L., Seon, B., Xu, J. and Riesen, J., Lectin-cell agglutination agent improves the efficiency of bovine somatic cloning, (59) (2003) 247
Du, Z.T., *see* Roh, S., (59) (2003) 283
Duan, E., *see* Wang, L., (59) (2003) 535

Duc, N.H., *see* Hanh, N.V., (59) (2003) 488
Duc, N.H., *see* Ty, L.V., (59) (2003) 290
Duc, N.H., Uoc, N.T., Ty, L.V., Hanh, N.V., Thanh, N.T., Bui, L.C., Anh, N.T., Huu, Q.X. and Nguyen, B.X, Potential for in vitro production of embryo from follicular oocyte of Yellow and Yellow-Red Sindhi crossbred cattle, (59) (2003) 442
Duchamp, G., *see* Moussa, M., (59) (2003) 373
Duchamp, G., *see* Moussa, M., (59) (2003) 1615
Duchi, R., *see* Galli, C., (59) (2003) 599
Duchi, R., *see* Lagutina, I., (59) (2003) 269
Duffy, P., *see* Papadopoulos, S., (59) (2003) 458
Duguay, F., *see* Baldassarre, H., (59) (2003) 831
Dungu-Kimbenga, B., *see* Irons, P.C., (59) (2003) 222
Dunlap, J.R., *see* Payton, R.R., (59) (2003) 496
Duque, P., Gómez, E., Díaz, E., Facal, N., Hidalgo, C. and Díez, C., Use of two replacements of serum during bovine embryo culture in vitro, (59) (2003) 889
Duque, P., Gomez, E., Hidalgo, C.O., Facal, N. and Diez, C., Bovine trophectoderm cell differentiation after culture in simple medium with reduced osmolarity, (59) (2003) 341
Duque, P., *see* Diez, C., (59) (2003) 486
Duque, P., *see* Hidalgo, C.O., (59) (2003) 366
Duque, P., *see* Royo, L.J., (59) (2003) 431
Durand, M., *see* Freret, S., (59) (2003) 445
Dwyer, C.M., Behavioural development in the neonatal lamb: effect of maternal and birth-related factors, (59) (2003) 1027
Dykstra, C.C., *see* Givens, M.D., (59) (2003) 382

Earl, C.R., *see* Fry, R.C., (59) (2003) 446
Echelard, Y., *see* Behboodi, E., (59) (2003) 237
Echelard, Y., *see* Destrempes, M.M., (59) (2003) 245
Echelard, Y., *see* Landry, A.M., (59) (2003) 355
Echelard, Y., *see* Memili, E., (59) (2003) 274
Eckardt, S., Leu, N.A. and McLaughlin, K.J., Reprogramming of somatic cell nuclei in cleavage stage blastomeres, (59) (2003) 249
Eckert, J.J., Houghton, F.D., Hawkhead, J.A., Leese, H.J., Picton, H. and Fleming, T.P., Does amino acid turnover predict the capacity of trophectoderm integrity in cultured human embryos?, (59) (2003) 319
Edwards, J.L., Schrick, F.N., Hockett, M.E., Saxton, A.M., Lawrence, J.L. and Payton, R.R., Development of clones constructed with maternal cytoplasm, (59) (2003) 250
Edwards, J.L., *see* Payton, R.R., (59) (2003) 496
Edwards, J.L., *see* Scenna, F.N., (59) (2003) 335
El Amiri, B., Melo de Sousa, N., Mecif, K., Desbuleux, H., Banga-Mboko, H. and Beckers, J.-F., Double radial immunodiffusion as a tool to identify pregnancy-associated glycoproteins in ruminant and nonruminant placentae, (59) (2003) 1291
El Amiri, B., *see* de Sousa, N.M., (59) (2003) 1131
Elias, A., *see* Willard, S., (59) (2003) 1799
Engbjerg, L., *see* Maddox-Hyttel, P., (59) (2003) 273
Enosawa, S., *see* Mitani, T., (59) (2003) 537
Enright, B.P. and Tian, X.C., Epigenetic characteristics of nuclear transfer donor cells in vitro: effect of histone acetylation, (59) (2003) 251
Enright, B.P., *see* Bormann, C.L., (59) (2003) 471
Enrique, E., *see* Anel, L., (59) (2003) 386
Erdin, D.K., *see* Reist, M., (59) (2003) 1707
Esaki, R., *see* Nagashima, H., (59) (2003) 95
Esaki, R., *see* Ushijima, H., (59) (2003) 316
Esaki, R., Yamashita, C., Yoshioka, H., Ushijima, H., Kuwayama, M. and Nagashima, H., Successful cryopreservation of porcine IVM-derived embryos, (59) (2003) 300
Escribá, M.J., *see* Silvestre, M.A., (59) (2003) 1469
Esper, C.R., *see* Meo, S.C., (59) (2003) 476
Esper, C.R., *see* Seneda, M.M., (59) (2003) 1435
Esteban, C., *see* Lucena, E., (59) (2003) 272
estradiol, *see* Meo, S.C., (59) (2003) 476
Etches, R., *see* Lavoir, M.-C., (59) (2003) 379
Evans, G., *see* Hollinshead, F.K., (59) (2003) 209
Evans, G., *see* Maxwell, W.M.C., (59) (2003) 511
Evans, G., *see* Morris, L.H.A., (59) (2003) 512
Evans, G.J., *see* van Rens, B.T.T.M., (59) (2003) 915

Faber, D.C., Molina, J.A., Ohlrichs, C.L., Vander Zwaag, D.F. and Ferré, L.B., Commercialization of animal biotechnology, (59) (2003) 125
Faber, D.C., *see* Nedambale, T.L., (59) (2003) 307
Facal, N., *see* Diez, C., (59) (2003) 486
Facal, N., *see* Duque, P., (59) (2003) 341
Facal, N., *see* Duque, P., (59) (2003) 889
Facal, N., *see* Hidalgo, C.O., (59) (2003) 366
Faerge, I., Strejcek, F., Laurincik, J., Rath, D., Niemann, H., Schellander, K., Rosenkranz, C., Bjerregaard, B., Hyttel, P.M. and Grondahl, C., Effects of meiosis-activating sterol on porcine cumulus–oocyte complex maturation, fertilization and pronucleus formation, (59) (2003) 487
Faria, C.C., *see* Adona, P.R., (59) (2003) 479
Faria, C.C., *see* Adona, P.R., (59) (2003) 480
Fassbender, M., *see* Goeritz, F., (59) (2003) 1487
Fatehi, A.N., Bevers, M.M., Colenbrander, B., Dehnad, H. and Gadella, B.M., Effect of sperm

nuclear damage on fertilization and subsequent embryo development, (59) (2003) 444
Feehan, T., *see* Tatham, B.G., (59) (2003) 709
Fernandez, L., *see* Hidalgo, C.O., (59) (2003) 366
Fernández-Arias, A., *see* Alabart, J.L., (59) (2003) 1345
Fernandez-Gonzalez, R., Jimenez, A., Bilbao, A., Rodriguez de Fonseca, F., Pintado, B. and Gutierrez-Adan, A., Culture of preimplantation mouse embryos with fetal calf serum affects fetal expression of imprinted genes and postnatal growth and behavior, (59) (2003) 320
Fernandez-Gonzalez, R., *see* Jimenez, A., (59) (2003) 509
Ferré, L.B., Kaiser, G., Cabodevila, J., López Escribano, N., Aller Atucha, J.F., Palma, G.A. and Alberio, R.H., Effect of age and stage of embryo development on post-cryopreservation embryo survival of in vitro bovine embryos, (59) (2003) 301
Ferré, L.B., *see* Faber, D.C., (59) (2003) 125
Ferreira, A.M., *see* Camargo, L.S.A., (59) (2003) 338
Ferreira, A.M., *see* Viana, J.H.M., (59) (2003) 415
Ferreira, C.R., *see* Yamazaki, W., (59) (2003) 293
Ferrier, P., *see* Pallante, B., (59) (2003) 277
Ferrier, T., *see* Gao, S., (59) (2003) 253
Fieni, F., Rowe, J., Van Hoosear, K., Burucoa, C., Oppenheim, S., Anderson, G., Murray, J. and BonDurant, R., Presence of caprine arthritis–encephalitis virus (CAEV) proviral DNA in genital tract tissues of superovulated dairy goat does, (59) (2003) 1515
Fierro, R., *see* Jiménez, I., (59) (2003) 1171
Figueiredo, R.A., Araujo, A.F. and Barros, C.M., Pregnancy rates after fixed-time artificial insemination in beef cattle, using estradiol benzoate associated with $PGF_{2\alpha}$, (59) (2003) 218
Finlayson, G.R., *see* Druery, G.V., (59) (2003) 391
First, N.L., *see* Lee, H.J., (59) (2003) 270
Fischer-Brown, A.E., Monson, R.L., Northey, D.L., Rutledge, J.J., Albrecht, K.A. and Schaefer, D.M., Reduced dietary protein improves pregnancy rates following transfer of in vitro produced bovine embryos, (59) (2003) 364
Fisher, P., *see* Hill, J., (59) (2003) 258
Fleming, T.P., *see* Eckert, J.J., (59) (2003) 319
Fletcher, J., *see* Gao, S., (59) (2003) 253
Flint, A., Brink, Z., and Seidel, Jr., G.E., Use of heterospermic insemination and genotyping embryos to compare fertility of flow-sorted sperm from individual bulls, (59) (2003) 507
Fokker, H.W., *see* Vos, P.L.A.M., (59) (2003) 332
Folch, J., *see* Alabart, J.L., (59) (2003) 1345
Folch, J., *see* Isachenko, V., (59) (2003) 1209
Foley, B., *see* Honaramooz, A., (59) (2003) 536
Foote, R.H., Effect of processing and measuring procedures on estimated sizes of bull sperm heads, (59) (2003) 1765
Forsberg, M., *see* Cavestany, D., (59) (2003) 1787
Forsyth, J.T., *see* Wells, D.N., (59) (2003) 45
Francisci, C., *see* Brevini, T.A.L., (59) (2003) 440
Fremond, C., *see* Zhou, Q., (59) (2003) 296
French, A., *see* Ruddock, N.T., (59) (2003) 432
Freret, S., Grimard, B., Joly, C., Ponchon, S., Durand, M., Ponter, A., Ponsart, C. and Humblot, P., Effect of growth rate variation on OPU-IVF embryo production in superovulated overfed dairy heifers, (59) (2003) 445
Freret, S., *see* Servely, J.L., (59) (2003) 288
Fry, R.C., Schenk, J.L. and Earl, C.R., Production of IVF embryos from adult and juvenile cattle using sex-sorted sperm, (59) (2003) 446
Fthenakis, G.C., *see* Gouletsou, P.G., (59) (2003) 1959
Fuchimoto, D., Kikuchi, K., Iwamoto, M., Onishi, A., Nagai, T., Suzuki, S., Watanabe, S., Tamas, S., Sakatani, M. and Takahashi, M., Detection of SRY gene expression in preimplantation porcine embryo produced in vitro, (59) (2003) 418
Fuchimoto, D., *see* Dinnyes, A., (59) (2003) 299
Fuchimoto, D., *see* Iwamoto, M., (59) (2003) 261
Fuchimoto, D., *see* Kikuchi, K., (59) (2003) 450
Fuchimoto, D., *see* Nakai, M., (59) (2003) 522
Fuchimoto, D., *see* Somfai, T., (59) (2003) 498
Fuchimoto, D., *see* Medvedev, S. Yu., (59) (2003) 327
Fujimura, T., *see* Kurome, M., (59) (2003) 267
Fujimura, T., *see* Nagashima, H., (59) (2003) 95
Fujino, Y., Yonemura, I., Suzuki, M. and Misumi, K., Cryotolerance of porcine embryos—the need for batch-wise assessment, (59) (2003) 302
Fujita, T., *see* Miyashita, N., (59) (2003) 1557
Fukui, Y., *see* Hayashi, K., (59) (2003) 1355
Fukui, Y., *see* Oyamada, T., (59) (2003) 348
Fukunaga, S., *see* Kato-Mori, Y., (59) (2003) 334
Fulka Jr., J., *see* Ogushi, S., (59) (2003) 495
Fulka, J., *see* Fulka Jr., J., (59) (2003) 1879
Fulka Jr., J., Moor, R.M., Loi, P. and Fulka, J., Enucleolation of porcine oocytes, (59) (2003) 1879
Furusawa, T., *see* Hosoe, M., (59) (2003) 421

Gadea, J., *see* Garcia, E., (59) (2003) 519
Gadea, J., *see* Matás, C., (59) (2003) 463
Gadea, J., *see* Romar, R., (59) (2003) 975
Gadella, B.M., *see* Fatehi, A.N., (59) (2003) 444
Gadella, B.M., *see* Neild, D.M., (59) (2003) 1693

Gajda, B., *see* Kątska-Książkiewicz, L., (59) (2003) 1567
Galik, P.K., *see* Givens, M.D., (59) (2003) 382
Galli, C., Duchi, R., Crotti, G., Turini, P., Ponderato, N., Colleoni, S., Lagutina, I. and Lazzari, G., Bovine embryo technologies, (59) (2003) 599
Galli, C., *see* Lagutina, I., (59) (2003) 269
Galloway, D., *see* West, M., (59) (2003) 405
Gandol, F., *see* Abdoon, A.S.S., (59) (2003) 481
Gandol, F., *see* Bagg, M.A., (59) (2003) 436
Gandol, F., *see* Brevini, T.A.L., (59) (2003) 440
Gandy, S., *see* Willard, S., (59) (2003) 1799
Gao, S., McGarry, M., Ferrier, T., Pallante, B., Gasparrini, B., Fletcher, J., Harkness, L., De Sousa, P.A., McWhir, J. and Wilmut, I., Effect of cell confluence using embryonic stem cells for the production of cloned mice, (59) (2003) 253
Gao, S., *see* Pallante, B., (59) (2003) 277
Garbayo, J.M., *see* Alabart, J.L., (59) (2003) 1345
García, A., *see* Jiménez, I., (59) (2003) 1171
García-Ximénez, F., *see* Silvestre, M.A., (59) (2003) 1469
Garcia Ruiz, J.P., *see* Picazo, R.A., (59) (2003) 412
Garcia, A. and De Jarnette, M., The effects of gonadotropin-releasing hormone (GnRH) or estradiol cypionate (ECP) treatment at CIDR insertion on reproductive performance of virgin beef heifers, (59) (2003) 219
Garcia, E., Coy, P., Matas, C., Gadea, J., Ruiz, S. and Romar, R., Intracytoplasmic sperm injection of porcine oocytes with two different in vitro capacitation systems, (59) (2003) 519
Garcia, J.M., *see* Avelino, K.B., (59) (2003) 483
Garcia, J.M., *see* Seneda, M.M., (59) (2003) 1435
Garcia, J.M., *see* Yamazaki, W., (59) (2003) 293
Garcia, J.M., *see* Meo, S.C., (59) (2003) 476
Garcia-Macias, Martinez-Pastor, F., Paz, P., Anel, E., Alvarez, M., Kaabi, M., Muro, J. and Anel, L., Annexin V-FITC/PI assay in bull and ram semen, (59) (2003) 220
Garcia-Macias, V., *see* Anel, L., (59) (2003) 386
Garde, J.J., *see* Martinez-Pastor, F., (59) (2003) 397
Gardner, D.K. and Lane, M., Mouse oocytes developed from follicle culture have perturbed metabolism and compromised enzyme activity, (59) (2003) 407
Gardner, D.K., *see* Hewitt, E.A., (59) (2003) 420
Gardner, D.K., *see* Lane, M., (59) (2003) 344
Gardner, D.K., *see* Reed, L.C., (59) (2003) 349
Gardner, D.K., *see* Sheehan, C., (59) (2003) 313
Gardner, D.K., *see* Stilley, K.S., (59) (2003) 459
Gardón, J.C., *see* Matás, C., (59) (2003) 463
Gasparrini, B., Sayoud, H., Neglia, G., de Matos, D.G., Donnay, I. and Zicarelli, L., Effects of cysteamine on glutathione synthesis of buffalo (*bubalus bubalis*) oocytes during in vitro maturation, (59) (2003) 321
Gasparrini, B., *see* Gao, S., (59) (2003) 253
Gasparrini, B., *see* Neglia, G., (59) (2003) 374
Gasparrini, B., *see* Neglia, G., (59) (2003) 1123
Gasparrini, B., *see* Wilding, M., (59) (2003) 466
Gauthier, M., *see* Baldassarre, H., (59) (2003) 831
Gavaga, Q.A., Colazo, M.G., Martínez, M.F., Wilde, R.E. and Kastelic, J.P., Used CIDR and injectable progesterone for resynchronization of estrus in fixed-time inseminated beef heifers, (59) (2003) 221
Gavaga, Q.A., *see* Colazo, M.G., (59) (2003) 215
Gavin, W., Butler, R., Hawkins, N., Chen, L.H., Hayden, E., Picarella, M. and Melican, D., Comparison of enucleation methods for the production of transgenic dairy goats by somatic cell nuclear transfer, (59) (2003) 254
Gavin, W., *see* Butler, R.E., (59) (2003) 240
Gavin, W., *see* Melican, D., (59) (2003) 455
Geiger, L.N., *see* Sartori, R., (59) (2003) 533
Genovese, A., *see* Mirabella, N., (59) (2003) 1999
Gerber, D., de Haas, K. and Nothling, J.O., Effect of bovine seminal plasma on the ability of buffalo (*Syncerus caffer*) spermatozoa to fertilize bovine oocytes in vitro, (59) (2003) 392
Gerber, D., *see* Herold, F.C., (59) (2003) 393
Gerber, D., *see* Jooste, F., (59) (2003) 443
Gerber, D., *see* Nothling, J.O., (59) (2003) 225
Gerber, D., *see* Nöthling, J.O., (59) (2003) 1929
Gerstenberg, C., *see* Nöthling, J.O., (59) (2003) 1929
Geshi, M., Oshimo, Y., Takahashi, H., Kubo, Y., Takahashi, M., Inumaru, S., Yokomizo, Y. and Okano, A., Effects of a single intrauterine infusion of liposomal recombinant bovine interferon-τ on interestrous intervals in heifers, (59) (2003) 333
Ghazi, D.F., *see* Bielanski, A., (59) (2003) 381
Gil, J., Lundeheim, N., Söderquist, L. and Rodríguez-Martínez, H., Influence of extender, temperature, and addition of glycerol on post-thaw sperm parameters in ram semen, (59) (2003) 1241
Gil, J., Rodriguez-Irazoqui, M., Lundeheim, N., Söderquist, L. and Rodríguez-Martínez, H., Fertility of ram semen frozen in Bioexcell® and used for cervical artificial insemination, (59) (2003) 1157
Gil, M.A., *see* Vazquez, J.M., (59) (2003) 1605
Gilardi, S.G.T., *see* Camargo, L.S.A., (59) (2003) 338
Gilchrist, R.B., *see* Sutton, M.L., (59) (2003) 500

Gilchrist, R.B., *see* Thomas, R.E., (59) (2003) 501
Giller, H., Montag, M., Gilles, M., van der Ven, H. and Schellander, K., Intracellular calcium ($[Ca^{2+}]_i$) transient induced by microinjection of bovine sperm extract into homologs IVM-oocytes, (59) (2003) 473
Gilles, M., *see* Giller, H., (59) (2003) 473
Gilles, M., *see* Mamo, S., (59) (2003) 427
Gilles, M., *see* Mosslacher, G., (59) (2003) 372
Gilles, M., *see* Nabiev, D., (59) (2003) 226
Gilles, M., *see* Tesfaye, D., (59) (2003) 434
Ginther, O.J., *see* Bergfelt, D.R., (59) (2003) 1811
Giraldo, A.M., *see* Harris, R.F., (59) (2003) 448
Givens, M.D., Stringfellow, D.A., Riddell, K.P., Galik, P.K., Carson, R.L., Riddell, M.G., Dykstra, C.C. and Boykin, D.W., Pregnancies established after treatment of IVF bovine embryos with an antiviral agent, (59) (2003) 382
Gjorret, J.O., Avery, B. and Maddox-Hyttel, P., Active-caspase-3, tunel and ultrastructure of apoptotic cell death in bovine blastocysts, (59) (2003) 322
Gjorret, J.O., *see* Knijn, H.M., (59) (2003) 325
Godke, R., *see* Wirtu, G., (59) (2003) 354
Godke, R.A., *see* Barry, D.M., (59) (2003) 337
Godke, R.A., *see* Damiani, P., (59) (2003) 390
Godke, R.A., *see* Landry, A.M., (59) (2003) 355
Godke, R.A., *see* Sansinena, M., (59) (2003) 287
Goeritz, F., Quest, M., Wagener, A., Fassbender, M., Broich, A., Hildebrandt, T.B., Hofmann, R.R. and Blottner, S., Seasonal timing of sperm production in roe deer: interrelationship among changes in ejaculate parameters, morphology and function of testis and accessory glands, (59) (2003) 1487
Gomez, E., *see* Diez, C., (59) (2003) 486
Gomez, E., *see* Duque, P., (59) (2003) 341
Gómez, E., *see* Duque, P., (59) (2003) 889
Gomez, E., *see* Hidalgo, C.O., (59) (2003) 366
Gomez, E., *see* Royo, L.J., (59) (2003) 431
Gomez, M.C., *see* Harris, R.F., (59) (2003) 448
Gomez, M.C., *see* Pope, C.E., (59) (2003) 308
Gonçalves, P.B.D., *see* de Sousa, N.M., (59) (2003) 1131
Goncalves, P.B.D., *see* Oliveira, D.F.F., (59) (2003) 375
Gonzalez de Bulnes, A., *see* Picazo, R.A., (59) (2003) 412
González-Márquez, H., *see* Jiménez, I., (59) (2003) 1171
Gorniewska, M., *see* Modlinski, J.A., (59) (2003) 357
Gouletsou, P.G., Amiridis, G.S., Cripps, P.J., Lainas, T., Deligiannis, K., Saratsis, P. and Fthenakis, G.C., Ultrasonographic appearance of clinically healthy testicles and epididymides of rams, (59) (2003) 1959
Goyache, F., *see* Royo, L.J., (59) (2003) 431
Gravance, C.G., *see* Ball, B.A., (59) (2003) 901
Graves, K., *see* Willard, S., (59) (2003) 1799
Grazul-Bilska, A.T., Choi, J.T., Bilski, J.J., Weigl, R.M., Kirsch, J.D., Kraft, K.C., Reynolds, L.P. and Redmer, D.A., Effects of epidermal growth factor on early embryonic development after in vitro fertilization of oocytes collected from ewes treated with follicle stimulating hormone, (59) (2003) 1449
Greenstein, J.L., *see* Prather, R.S., (59) (2003) 115
Greve, T., *see* Avery, B., (59) (2003) 987
Greve, T., *see* Boe-Hansen, G.B., (59) (2003) 439
Greve, T., *see* Bogh, I.B., (59) (2003) 238
Greve, T., *see* Lopes, A.S., (59) (2003) 345
Greve, T., *see* Pedersen, H.G., (59) (2003) 430
Greve, T., *see* Schmidt, M., (59) (2003) 331
Grimard, B., *see* Freret, S., (59) (2003) 445
Groen, W., *see* Nedambale, T.L., (59) (2003) 307
Grondahl, C., *see* Faerge, I., (59) (2003) 487
Grupen, C.G., McIlfatrick, S.M., Ashman, R.J. and Nottle, M.B., Developmental competency of prepubertal and adult porcine oocytes, (59) (2003) 447
Grupen, C.G., *see* Bagg, M.A., (59) (2003) 436
Grupen, C.G., *see* Brevini, T.A.L., (59) (2003) 440
Guenther, J.N., *see* Sartori, R., (59) (2003) 533
Guido, S.I., *see* Andrade, J.C.O., (59) (2003) 358
Guignot, F., *see* King, W.A., (59) (2003) 451
Guo, J., *see* Roh, S., (59) (2003) 283
Gustafsson, H., *see* Båge, R.B, (59) (2003) 484
Gutierrez-Adan, A., *see* Fernandez-Gonzalez, R., (59) (2003) 320
Gutierrez-Adan, A., *see* Jimenez, A., (59) (2003) 509
Gutierrez-Adan, A., *see* Lonergan, P., (59) (2003) 493
Gutierrez-Adan, A., *see* Rizos, D., (59) (2003) 350

Hallap, T., *see* Båge, R.B, (59) (2003) 484
Hallford, D.M., *see* Wells, N.H., (59) (2003) 1403
Halmekyto, M., *see* Piltti, K., (59) (2003) 403
Hamilton, H.M., Kleemann, D.O., Maddocks, S., Rudiger, S.R., Walker, S.K. and Peura, T.T., In vitro development of cross-species nuclear transfer embryos constructed with ovine, bovine and porcine donor cells and ovine cytoplasts, (59) (2003) 255
Hamilton, H.M., *see* Chang, W.C., (59) (2003) 241

Hammon, H.M., *see* Reist, M., (59) (2003) 1707
Han, J.S., *see* Lee, K.K., (59) (2003) 491
Han, J.Y., *see* Kim, T.M., (59) (2003) 264
Han, J.Y., *see* Park, E.S., (59) (2003) 248
Han, M.-S., Niwa, K. and Kasai, M., Vitrification of rat embryos at various developmental stages, (59) (2003) 1851
Han, Y., *see* Yu, Y.S., (59) (2003) 1277
Han, Y.M., Kang, Y.K., Koo, D.B. and Lee, K.K., Nuclear reprogramming of cloned embryos produced in vitro, (59) (2003) 33
Han, Y.M., *see* Lee, K.K., (59) (2003) 491
Hanada, A., *see* Matsukawa, K., (59) (2003) 454
Hanada, H., *see* Iwamoto, M., (59) (2003) 261
Handler, J., Königshofer, M., Kindahl, H., Schams, D. and Aurich, C., Secretion patterns of oxytocin and PGF2α-metabolite in response to cervical dilatation in cyclic mares, (59) (2003) 1381
Hanh, N.V., *see* Duc, N.H., (59) (2003) 442
Hanh, N.V., *see* Ty, L.V., (59) (2003) 290
Hanh, N.V., Uoc, N.T., Ty, L.V., Duc, N.H., Thanh, N.T., Bui, L.C., Anh, N.T., Huu, Q.X. and Nguyen, B.X., Oocyte production in non-human primate: effect of the combination of prior in vivo hormonal treatment and in vitro culture on the maturational competence, (59) (2003) 488
Hanniman, A., *see* Tsuboi, T., (59) (2003) 385
Hanrahan, J.P., *see* Papadopoulos, S., (59) (2003) 458
Hansen, G., *see* Dindot, S.V., (59) (2003) 417
Hansen, P.J., *see* Tekin, S., (59) (2003) 787
Harayama, H., *see* Isaji, M., (59) (2003) 474
Harayama, H., *see* Nguyen, V.T., (59) (2003) 719
Harayama, H., *see* Thuan, N.V., (59) (2003) 351
Hardin, D.K., *see* Rosenkrans, K.S., (59) (2003) 1087
Haresign, W., *see* Bari, F., (59) (2003) 1265
Harkness, L., *see* Gao, S., (59) (2003) 253
Harris, B.L., *see* Smeaton, D.C., (59) (2003) 617
Harris, R.F., Gomez, M.C., Pope, C.E., Giraldo, A.M., King, A.L. and Dresser, B.L., Differential staining of trophectoderm and inner cell mass cells of cat in vitro derived blastocysts, (59) (2003) 448
Harris, R.F., *see* Pope, C.E., (59) (2003) 308
Hartwich, K.M., *see* Chang, W.C., (59) (2003) 241
Hartwich, K.M., *see* Maddox-Hyttel, P., (59) (2003) 273
Hartwich, K.M., Walker, S.K., Jurisevic, A.M., O'Carroll, L.A. and McMillen, I.C., Evidence of impaired placental function in cloned fetal sheep during late gestation (59) (2003) 256
Harvey, A.J., Kind, K.L. and Thompson, J.G., Oxygen-regulated gene expression in bovine blastocysts, (59) (2003) 208
Hasan, L., *see* Ménétrey, F., (59) (2003) 211
Hasebe, Y., *see* Kurome, M., (59) (2003) 267
Hashimoto, M., *see* Iwamoto, M., (59) (2003) 261
Hasler, J.F., Bilby, C.R., Collier, R.J., Denham, S.C. and Lucy, M.C., Effect of recombinant bovine somatotropin on superovulatory response and recipient pregnancy rates in a commercial embryo transfer program, (59) (2003) 1919
Hasunuma, T., *see* Yotsushima, K., (59) (2003) 295
Hawkhead, J.A., *see* Eckert, J.J., (59) (2003) 319
Hawkins, N., *see* Butler, R.E., (59) (2003) 240
Hawkins, N., *see* Gavin, W., (59) (2003) 254
Hawley, R.J., *see* Prather, R.S., (59) (2003) 115
Hayashi, K., Miyamoto, A., Konari, A., Ohtani, M. and Fukui, Y., Effect of local interaction of reactive oxygen species with prostaglandin $F_{2\alpha}$ on the release of progesterone in ovine corpora lutea in vivo, (59) (2003) 1355
Hayashi, Y., *see* Nakai, M., (59) (2003) 522
Hayden, E., *see* Butler, R.E., (59) (2003) 240
Hayden, E., *see* Destrempes, M.M., (59) (2003) 245
Hayden, E., *see* Gavin, W., (59) (2003) 254
Hayes, E.S., Curnow, E.C., Trounson, A.O. and Unemori, E.N., Relaxin administration during IVF/ET in *macaca fascicularis*, (59) (2003) 365
Hayes, E.S., *see* Curnow, E.C., (59) (2003) 363
He, X., *see* Su, L., (59) (2003) 499
Hendriana, Y., *see* Curnow, E.C., (59) (2003) 363
Hendriksen, P.J.M., *see* Knijn, H.M., (59) (2003) 325
Herhlodt, G., *see* Barry, D.M., (59) (2003) 337
Hermier, D., *see* Douard, V., (59) (2003) 753
Hernandez, J., *see* Bartolome, J., (59) (2003) 1991
Hernandez, J., *see* Phillips, T.C., (59) (2003) 1441
Hernandez, J.A., *see* Wells, N.H., (59) (2003) 1403
Hernandez-Fonseca, H.J., *see* Sirisathien, S., (59) (2003) 1751
Herold, F.C., Gerber, D., de Haas, K., Nothling, J.O., Cooper, D., Theunisen, W. and Spillings, B., Comparison of three different media for freezing epididymal sperm from african buffalo (*syncerus caffer*) and influence of equilibration time on the post-thaw sperm quality, (59) (2003) 393
Herr, J., *see* Sarmento, O., (59) (2003) 330
Herradón, P.G., *see* Peña, A.I., (59) (2003) 1725
Herraez, P., *see* Anel, L., (59) (2003) 386
Herraez, P., *see* Paz, P., (59) (2003) 228
Herrera, J.A., *see* Jiménez, I., (59) (2003) 1171

Herrick, J.R. and Swanson, W.F., Gonadotropin exposure, salt storage and storage duration affect penetration of domestic cat oocytes by homologous spermatozoa, (59) (2003) 1503
Herrick, J.R., Boshoff, I.J., Krisher, R.L. and Bartels, P., Comparison of two methods for the cryopreservation of epididymal spermatozoa from wild african bovids, (59) (2003) 394
Herrmann, D., Pavlok, A., Motlik, J., Niemann, H. and Wrenzycki, C., Messenger RNA expression patterns in bovine oocytes derived from follicles of different size, (59) (2003) 419
Herrmann, D., *see* Wrenzycki, C., (59) (2003) 504
Heuwieser, W., *see* Drillich, M., (59) (2003) 951
Hewitt, E.A., Rawlinson, C.A., Stilley, K.S., Lane, M. and Gardner, D.K., Culture effects on mouse embryo gene expression are limited to the first three cleavage divisions, (59) (2003) 420
Heyman, Y., *see* Apimeteetumrong, M., (59) (2003) 235
Heyman, Y., *see* Servely, J.L., (59) (2003) 288
Hidalgo, C., *see* Duque, P., (59) (2003) 889
Hidalgo, C.O., Diez, C., Fernandez, L., Prieto, L., Duque, P., Facal, N. and Gomez, E., Serum insulin and IGF-I in recipient heifers fed with propylene-glycol prior to embryo transfer, (59) (2003) 366
Hidalgo, C.O., *see* Diez, C., (59) (2003) 486
Hidalgo, C.O., *see* Duque, P., (59) (2003) 341
Hidalgo, C.O., *see* Royo, L.J., (59) (2003) 431
Hiendleder, S., Prelle, K., Brüggerhoff, K., Wenigerkind, H., Reichenbach, H.-D., Stojkovic, M., Müller, S., Brem, G., Zakhartchenko, V. and Wolf, E., Evidence for hybrid vigor by nuclear-cytoplasmic interaction in cultured cells from transmitochondrial cloned bovine fetuses, (59) (2003) 257
Higashide, S., *see* Hosoi, Y., (59) (2003) 408
Hildebrandt, T.B., *see* Goeritz, F., (59) (2003) 1487
Hill, J., Fisher, P., Linke, R., Cain, D., Roman, H. and Schlafer, D., Trophoblast MHC-I expression and apoptosis in bovine nuclear transfer embryos, (59) (2003) 258
Hinrichs, K., *see* Choi, Y.-H., (59) (2003) 1219
Hinrichs, K., *see* Love, L.B., (59) (2003) 765
Hirabayashi, M., Kato, M., Ishikawa, A. and Hochi, S., Attempts of cloning rats by serial nuclear transplantation, (59) (2003) 259
Hirabayashi, M., *see* Hochi, S., (59) (2003) 303
Hirako, M., *see* Kawaguchi, M., (59) (2003) 528
Hirako, M., Takahashi, H. and Kimura, K., Change in concentration of porcine FSH in bovine peripheral blood following a single intramuscular injection with aluminum hydroxide gel suspension, (59) (2003) 526
Hirako, M. *see* Luo, H. (59) (2003) 453
Hirao, M., *see* Hochi, S., (59) (2003) 303
Hirao, Y., *see* Bing, Y.Z., (59) (2003) 470
Hirao, Y., *see* Bing, Y.Z., (59) (2003) 863
Hirayama, H., Kageyama, S., Moriyasu, S., Takahashi, Y., Katagiri, S., Touen, K., Watanabe, K., Yamashina, H., Onoe, S. and Minamihashi, A., Rapid sexing of pre-implantation bovine embryos using loop-mediated isothermal amplification, (59) (2003) 508
Hirayama, H., *see* Sawai, K., (59) (2003) 433
Hirose, A., *see* Bao, S., (59) (2003) 1231
Hisamatsu, S., *see* Kashiwazaki, N., (59) (2003) 423
Hishinuma, M., Suzuki, K. and Sekine, J., Recovery and cryopreservation of sika deer (*Cervus nippon*) spermatozoa from epididymides stored at 4 °C, (59) (2003) 813
Hochi, S., *see* Hirabayashi, M., (59) (2003) 259
Hochi, S., Terao, T., Kamei, M., Hirao, M. and Hirabayashi, M., Vitrification of pronuclear-stage rabbit zygotes by different ultra-rapid cooling procedures, (59) (2003) 303
Hockett, M.E., *see* Edwards, J.L., (59) (2003) 250
Hoffert, K.A., *see* Bertolini, M., (59) (2003) 416
Hofmann, R.R., *see* Goeritz, F., (59) (2003) 1487
Hollet, B.R., *see* Sirisathien, S., (59) (2003) 1751
Hollinshead, F.K., Evans, G., Maxwell, W.M.C. and O'Brien, J.K., Sex-sorting and re-cryopreservation of frozen-thawed ram sperm for in vitro embryo production, (59) (2003) 209
Hollinshead, F.K., *see* Maxwell, W.M.C., (59) (2003) 511
Hollinshead, F.K., *see* Morris, L.H.A., (59) (2003) 512
Holm, P., *see* Wrenzycki, C., (59) (2003) 504
Honaramooz, A., Megee, S., Foley, B. and Dobrinski, I., Use of adeno-associated virus for transfection of male germ cells for transplantation in pigs, (59) (2003) 536
Horii, T., Nagao, Y., Tokunaga, T. and Imai, H., Serum-free culture of murine primordial germ cells and embryonic germ cells, (59) (2003) 1257
Horng, Y.-M. and Huang, M.-C., Male-specific DNA sequences in pigs, (59) (2003) 841
Horvat, G. and Bilkei, G., Exogenous prostaglandin $F_2\alpha$ at time of ovulation improves reproductive efficiency in repeat breeder sows, (59) (2003) 1479
Hoshi, H., In vitro production of bovine embryos and their application for embryo transfer, (59) (2003) 675

Hoshino, Y., Nagao, Y., Minami, N., Yamada, M., Uchida, M., Shimatsu, Y., Miyake, M. and Imai, H., Improved birth rates of cloned miniature pig using in vitro-matured porcine oocytes co-cultured with follicle shells, (59) (2003) 260
Hosoe, M., Furusawa, T., Sakatani, M., Tokunaga, T., Schultz, R.M. and Takahashi, M., RNA interference of green fluorescent protein gene in mouse embryos by injection of long/short dsRNAs into cytoplasm or pronucleus, (59) (2003) 421
Hosoe, M., *see* Kaneko, H., (59) (2003) 409
Hosoi, Y., *see* Matsumoto, K., (59) (2003) 428
Hosoi, Y., *see* Saeki, K., (59) (2003) 468
Hosoi, Y., Takahashi, M., Higashide, S., Matsumoto, K., Saeki, K., Iritani, A. and Miyano, T., Development of rabbit preantral follicles isolated from ovaries of sexually matured doe in the SCID mice, (59) (2003) 408
Hossepian de Lima, V.F.M., *see* Alves, B.C.A., (59) (2003) 1415
Houghton, F.D., *see* Eckert, J.J., (59) (2003) 319
Howard, J.G., *see* Spindler, R.E., (59) (2003) 315
Huang, J.C., *see* Shen, P.C., (59) (2003) 289
Huang, M.-C., *see* Horng, Y.-M., (59) (2003) 841
Huang, S., *see* Parks, J.E., (59) (2003) 73
Huang, Y., *see* Spindler, R.E., (59) (2003) 315
Huber, C., *see* Kühholzer-Cabot, B., (59) (2003) 265
Huber, E., *see* Kühholzer-Cabot, B., (59) (2003) 265
Hull, C.D., *see* Berg, D.K., (59) (2003) 406
Humblot, P., *see* Freret, S., (59) (2003) 445
Hur, T.Y., *see* Park, S.J., (59) (2003) 227
Huu, Q.X., *see* Duc, N.H., (59) (2003) 442
Huu, Q.X., *see* Hanh, N.V., (59) (2003) 488
Huu, Q.X., *see* Ty, L.V., (59) (2003) 290
Hwang, I.S., Cheong, H.T., Yang, B.K., Kim, C.I. and Park, C.K., Glycosidase activity and fertilizing ability in vitro by incubation of frozen–thawed spermatozoa in the pig, (59) (2003) 461
Hwang, I.-T. *see* Lee, M.-S. (59) (2003) 383
Hwang, W.S., Park, E.S., Jang, G., Kang, S.K., Lee, B.C. and Lim, J.M., Improved development after treatment of donor somatic cells and clone embryos with hemoglobin and/or β-mercaptoethanol, (59) (2003) 342
Hwang, W.S., *see* Cho, J.K., (59) (2003) 242
Hwang, W.S., *see* Hyun, S.H., (59) (2003) 1641
Hwang, W.S., *see* Jang, G., (59) (2003) 252
Hwang, W.S., *see* Kim, T.M., (59) (2003) 264
Hwang, W.S., *see* Koo, J.M., (59) (2003) 490
Hwang, W.-s., *see* Lee, G.-s., (59) (2003) 1949
Hyttel, P., *see* Mosslacher, G., (59) (2003) 372
Hyttel, P.M., *see* Faerge, I., (59) (2003) 487
Hyun, S.H., Lee, G.S., Kim, D.Y., Kim, H.S., Lee, S.H., Kim, S., Lee, E.S., Lim, J.M., Kang, S.K., Lee, B.C. and Hwang, W.S., Effect of maturation media and oocytes derived from sows or gilts on the development of cloned pig embryos, (59) (2003) 1641
Hyun, S.H., *see* Koo, J.M., (59) (2003) 490
Hyun, S.-h., *see* Lee, G.-s., (59) (2003) 1949
Hzimhanovich, B.B., *see* Barry, D.M., (59) (2003) 337

Iacono, E., *see* Mari, G., (59) (2003) 529
Ichihara, N., *see* Kashiwazaki, N., (59) (2003) 423
Ideta, A., Iwasa, S., Takedomi, T., Konishi, M., Sakai, S., Okamoto, Y., Urakawa, M., Miyamoto, A. and Aoyagi, Y., Pregnancy rates in recipient heifers after administration of human chorionic gonadotropin or a gonadotropin-releasing hormone agonist on day five of the estrous cycle, (59) (2003) 359
Ikeda, S., Somekawa, S., Imai, H. and Yamada, M., Effects of midkine on the gene expression in bovine Cumulus cells, (59) (2003) 489
IL, *see* Clark, S.G., (59) (2003) 441
IL, *see* Clark, S.G., (59) (2003) 441
Im, G.-S., *see* Yang, B.-C., (59) (2003) 317
Im, K.-S., *see* Yang, B.-C., (59) (2003) 317
Im, K.-S. *see* Lee, M.-S. (59) (2003) 383
Im, S.K., *see* Seong, H.H., (59) (2003) 336
Im, S.-K., *see* Yang, B.-C., (59) (2003) 317
Im, Y.J., *see* Cho, S.K., (59) (2003) 518
Im, Y.J., *see* Yin, X.J., (59) (2003) 294
Imai, H., *see* Horii, T., (59) (2003) 1257
Imai, H., *see* Hoshino, Y., (59) (2003) 260
Imai, H., *see* Ikeda, S., (59) (2003) 489
Inoue, K., *see* Miki, H., (59) (2003) 521
Inoue, K., *see* Ogura, A., (59) (2003) 87
Inoue, N., *see* Nakayama, M., (59) (2003) 411
Inumaru, S., *see* Geshi, M., (59) (2003) 333
Iritani, A., *see* Hosoi, Y., (59) (2003) 408
Iritani, A., *see* Matsumoto, K., (59) (2003) 428
Iritani, A., *see* Saeki, K., (59) (2003) 468
Irons, P.C., Mukhufhi, N., Michel, A., Peta, F., Dungu-Kimbenga, B. and Bertschinger, H.J., Effect of collection method, time and transport medium on a PCR test for *tritrichomonas foetus* in bulls, (59) (2003) 222
Irons, P.C., *see* Nothling, J.O., (59) (2003) 225
Isachenko, E., *see* Isachenko, V., (59) (2003) 1209
Isachenko, V., Alabart, J.L., Dattena, M., Nawroth, F., Cappai, P., Isachenko, E., Cocero, M.J., Olivera, J., Roche, A., Accardo, C., Krivo-

kharchenko, A. and Folch, J., New technology for vitrification and field (microscope-free) warming and transfer of small ruminant embryos, (59) (2003) 1209
Isaji, M., Iwata, H., Ohta, M., Harayama, H. and Miyake, M., Localization of LAP2β in oocytes and embryos during early development in cattle, (59) (2003) 474
Ishida, I., *see* Robl, J.M., (59) (2003) 107
Ishii, K., *see* Kawaguchi, M., (59) (2003) 528
Ishikawa, A., *see* Hirabayashi, M., (59) (2003) 259
Ishikawa, A. *see* Mori, T. (59) (2003) 371
Isom, S.C., Prather, R.S. and Rucker III, E.B., Heat-induced apoptosis in preimplantation porcine embryos, (59) (2003) 323
Ivancsics, J., *see* Bali Papp, A., (59) (2003) 437
Ivancsics, J., *see* Nagy, E., (59) (2003) 494
Iwamoto, M., Kikuchi, K., Akita, T., Takeda, K., Hanada, H., Hashimoto, M., Suzuki, S., Fuchimoto, D., Nagai, T. and Onishi, A., Live cloned pigs generated from nuclear transferred embryos encapsulated with sodium alginate, (59) (2003) 261
Iwamoto, M., *see* Dinnyes, A., (59) (2003) 299
Iwamoto, M., *see* Fuchimoto, D., (59) (2003) 418
Iwamoto, M., *see* Somfai, T., (59) (2003) 498
Iwasa, S., *see* Ideta, A., (59) (2003) 359
Iwata, H., *see* Isaji, M., (59) (2003) 474
Iwayama, H., *see* Oyamada, T., (59) (2003) 348

Jacobsen, T., *see* Avery, B., (59) (2003) 987
Jaiswal, R., *see* Singh, J., (59) (2003) 534
Jang, G., Park, E.S., Cho, J.K., Bhuiyan, M.M.U., Lee, B.C., Kang, S.K. and Hwang, W.S., Apoptosis derived from senescent donor cell in bovine preimplantation embryo, (59) (2003) 252
Jang, G., *see* Cho, J.K., (59) (2003) 242
Jang, G., *see* Hwang, W.S., (59) (2003) 342
Jang, G., *see* Park, E.S., (59) (2003) 248
Jaruansuwan, M., *see* Kitiyanant, Y., (59) (2003) 475
Jarvinen, M., *see* Piltti, K., (59) (2003) 403
Jatzkowski, A., *see* Viveiros, A.T.M., (59) (2003) 1905
Jayawardhana, G., *see* Tatham, B.G., (59) (2003) 404
Jenkin, G., *see* Cleary, M., (59) (2003) 388
Jensen, A.L., *see* Bogh, I.B., (59) (2003) 238
Jeong, B.S., *see* Wang, L., (59) (2003) 535
Jeong, B.S., Xue, F. and Tian, X., 5′-AZA-2′-deoxycytidine induces expression of PLP1, an X-linked gene normally silent in bovine adult fibroblasts, (59) (2003) 422
Jewgenow, K., *see* Zeuner, A., (59) (2003) 1421
Ji, W., *see* Si, W., (59) (2003) 314
Ji, W., *see* Su, L., (59) (2003) 499
Jiang, H.N., *see* Yu, Y.S., (59) (2003) 1277
Jiang, S., *see* Liu, J.-L., (59) (2003) 271
Jiang, S., *see* Sung, L., (59) (2003) 465
Jiang, S., *see* Xu, J., (59) (2003) 505
Jillella, D., *see* McGowan, M.R., (59) (2003) 1051
Jimenez del Rio, M., *see* Serrano, C., (59) (2003) 469
Jimenez, A., Fernandez-Gonzalez, R., Madrid-Bury, N., De la Fuente, J., Pintado, B. and Gutierrez-Adan, A., Hyperglycemia-induced apoptosis at pre-implantation stages affects sex ratio of mice foetuses, (59) (2003) 509
Jimenez, A., *see* Fernandez-Gonzalez, R., (59) (2003) 320
Jiménez, I., González-Márquez, H., Ortiz, R., Herrera, J.A., García, A., Betancourt, M. and Fierro, R., Changes in the distribution of lectin receptors during capacitation and acrosome reaction in boar spermatozoa, (59) (2003) 1171
Jin, J.I., *see* Park, H.S., (59) (2003) 278
Joly, C., *see* Freret, S., (59) (2003) 445
Jooste, F., Gerber, D., Vosloo, W., Boshoff, K. and de Haas, K., Association of foot and mouth disease virus (FMDV) with bovine oocytes during in vitro maturation, (59) (2003) 443
Joubert, J., *see* Bartels P., (59) (2003) 387
Jouneau, A., *see* Zho , Q., (59) (2003) 296
Juan, D.Y., *see* Mtango, N.R., (59) (2003) 456
Julian, M., *see* Liu, J.-L., (59) (2003) 271
Jun, J.H., Lim, C.K., Min, D.M., Whang, C.S., Koong, M.K. and Kim, M.K., Alterations of mitochondrial dynamics affect the developmental competence of mouse preimplantation embryos, (59) (2003) 324
Jung, J.Y., *see* Park, H.S., (59) (2003) 278
Junk, S.M., Dharmarajan, A. and Yovich, J.L., FSH priming improves oocyte maturation, but priming with FSH or hCG has no effect on subsequent embryonic development in an in vitro maturation program, (59) (2003) 1741
Jurisevic, A.M., *see* Hartwich, K.M., (59) (2003) 256

Kaabi, M., *see* Diaz, A., (59) (2003) 217
Kaabi, M., *see* Garcia-Macias, (59) (2003) 220
Kaal, L., *see* Merton, J.S., (59) (2003) 651
Kafi, M., *see* McGowan, M.R., (59) (2003) 1051

Kafidi, N., *see* Baldassarre, H., (59) (2003) 236
Kafidi, N., *see* Baldassarre, H., (59) (2003) 831
Kageyama, S., *see* Hirayama, H., (59) (2003) 508
Kageyama, S., *see* Sawai, K., (59) (2003) 433
Kaiser, C., *see* Nöthling, J.O., (59) (2003) 1929
Kaiser, G., *see* Ferré, L.B., (59) (2003) 301
Kaiser, G., *see* Panarace, M., (59) (2003) 513
Kakar, M.A., Maddocks, S., Lorimer, M.F., Kleemann, D.O., Rudiger, S.R. and Walker, S.K., Amino acid concentrations in oviduct fluid of superovulated ewes during the peri-ovular period, (59) (2003) 527
Kalogiannis, T., *see* Menegatos, J., (59) (2003) 1533
Kamei, M., *see* Hochi, S., (59) (2003) 303
Kamuran Ileri, I., *see* Banu Ozdas, O. (59) (2003) 457
Kandill, O.M., *see* Abdoon, A.S.S., (59) (2003) 421
Kaneko, H., Kikuchi, K., Noguchi, J. and Hosoe, M., Growth of porcine primordial follicles and their oocyte maturation by xenotransplantation, (59) (2003) 409
Kaneko, H., *see* Dinnyes, A., (59) (2003) 299
Kaneko, H., *see* Kikuchi, K., (59) (2003) 450
Kaneko, H., *see* Nakai, M., (59) (2003) 522
Kaneyama, K., *see* Kobayashi, S., (59) (2003) 376
Kang, S.K., *see* Cho, J.K., (59) (2003) 242
Kang, S.K., *see* Hwang, W.S., (59) (2003) 342
Kang, S.K., *see* Hyun, S.H., (59) (2003) 1641
Kang, S.K., *see* Jang, G., (59) (2003) 252
Kang, S.K., *see* Koo, J.M., (59) (2003) 490
Kang, S.-k., *see* Lee, G.-s., (59) (2003) 1949
Kang, Y.K., *see* Han, Y.M., (59) (2003) 33
Kang, Y.K., *see* Lee, K.K., (59) (2003) 491
Kania, G., *see* Kątska-Książkiewicz, L., (59) (2003) 1567
Kaňka, J., Gene expression and chromatin structure in the pre-implantation embryo, (59) (2003) 3
Kano, K., *see* Nagashima, H., (59) (2003) 95
Kano, M., *see* Kobayashi, S., (59) (2003) 304
Kaproth, M.T., *see* Parks, J.E., (59) (2003) 73
Karasiewicz, J., *see* Modlinski, J.A., (59) (2003) 357
Karatzas, C.N., *see* Baldassarre, H., (59) (2003) 236
Karatzas, C.N., *see* Baldassarre, H., (59) (2003) 831
Karatzas, C.N., *see* Keefer, C.L., (59) (2003) 263
Karche, S.D., *see* Selvaraju, S., (59) (2003) 1459
Karen, A., Beckers, J.-F.V., Sulon, J., de Sousa, N.M., Szabados, K., Reczigel, J. and Szenci, O., Early pregnancy diagnosis in sheep by progesterone and pregnancy-associated glycoprotein assays, (59) (2003) 1941
Kasai, M., *see* Han, M.-S., (59) (2003) 1851
Kashiwazaki, N., *see* Nakai, M., (59) (2003) 522
Kashiwazaki, N., Yamaguchi, R., Hisamatsu, S., Ichihara, N., Asari, M., Sonoki, S., Kono, T. and Shino, M., Expression of the Igf2 and the Igf2R parthenogenetic and biparental fetuses in the pig, (59) (2003) 423
Kasinathan, P., *see* Robl, J.M., (59) (2003) 107
Kastelic, J.P., Colazo, M.G., Martínez, M.F. and Mapletoft, R.J., Effects of a CIDR or MGA, reproductive status, and estradiol, GNRH or pLH treatment on pregnancy rate to fixed-time AI in beef heifers, (59) (2003) 223
Kastelic, J.P., *see* Colazo, M.G., (59) (2003) 215
Kastelic, J.P., *see* Gavaga, Q.A., (59) (2003) 221
Kastelic, J.P., *see* Martínez, M.F., (59) (2003) 224
Katagiri, S., *see* Hirayama, H., (59) (2003) 508
Katagiri, S. *see* Mori, T. (59) (2003) 371
Katayama, M. and Miyake, M., The effects of cysteine supplement on the formation of male pronucleus after intracytoplasmic sperm injection (ICSI) in porcine oocytes, (59) (2003) 520
Kato, M., *see* Hirabayashi, M., (59) (2003) 259
Kato, O., *see* Nakata, K., (59) (2003) 275
Kato-Mori, Y., Mori, T., Takahashi, M., Fukunaga, S., Takenouchi, K. and Nakamura, F., Co-existence of fibroblast growth factor-2 and heparan sulfate proteoglycan during the formation of bovine placenta, (59) (2003) 334
Kątska-Książkiewicz, L., Ryńska, B., Kania, G., Smorąg, Z., Gajda, B. and Pieńkowski, M., Timing of nuclear maturation of nonstored and stored domestic cat oocytes, (59) (2003) 1567
Kawaguchi, M., Hirako, M., Ishii, K. and Kimura, K., Ovarian superstimulation by a single administration of porcine FSH and aluminum hydroxide gel suspension in rats: comparison with conventional serial injection and polyvinylpyrrolidone emulsion methods, (59) (2003) 528
Kawahara, M., Wakai, T., Yamanaka, K., Sasada, H. and Sato, E., Nuclear status of porcine cloned embryos and their subsequent development after activation, (59) (2003) 262
Keefer, C.L., Begin, I., Bhatia, B., Keyston, R., Wang, B., Bilodeau, A.S., Zhou, J.F., Leduc, M., Lazaris, A., Baldassarre, H. and Karatzas, C.N., Somatic cell nuclear transfer in the goat: comparison of two activation protocols, (59) (2003) 263
Keefer, C.L., *see* Baldassarre, H., (59) (2003) 236
Keefer, C.L., *see* Begin, I., (59) (2003) 1839
Kelbert, D., *see* Bartolome, J., (59) (2003) 1991
Kelly, J.M., Kleemann, D.O. and Walker, S.K., A comparison of the in vitro development of cow and calf oocytes, (59) (2003) 449
Kelly, R., *see* McGowan, M.R., (59) (2003) 1051
Kemp, B., *see* Langendijk, P., (59) (2003) 849

Kemp, K.E., McCorkell, R.B., Woodbury, M. and Adams, G.P., Ovarian follicle development in white-tailed deer (*odocoileus virginianus*) in the anestrous season, (59) (2003) 395
Kerr, D.E., *see* Powell, A.M., (59) (2003) 281
Keyston, R., *see* Keefer, C.L., (59) (2003) 263
Khalid, M., *see* Bari, F., (59) (2003) 1265
Kidson, A., Schoevers, E., Langendijk, P., Verheijden, J., Colenbrander, B. and Bevers, M., The effect of oviductal epithelial cell co-culture during in vitro maturation on sow oocyte morphology, fertilization and embryo development, (59) (2003) 1889
Kidson, A., Schreier, L., Bevers, M.M., Colenbrander, B. and Dobrinsky, J.R., Reduction of polyspermic penetration after temporary arrest of in vitro-matured metaphase I pig oocytes, (59) (2003) 210
Kidson, A., *see* Schoevers, E.J., (59) (2003) 2017
Kikuchi, K., Fuchimoto, D., Noguchi, J., Kaneko, H. and Nagai, T., Fertilization and development in vitro of porcine oocytes matured in vitro and freed from zona pellucida, (59) (2003) 450
Kikuchi, K., *see* Dinnyes, A., (59) (2003) 299
Kikuchi, K., *see* Fuchimoto, D., (59) (2003) 418
Kikuchi, K., *see* Iwamoto, M., (59) (2003) 261
Kikuchi, K., *see* Kaneko, H., (59) (2003) 409
Kikuchi, K., *see* Nakai, M., (59) (2003) 522
Kikuchi, K., *see* Somfai, T., (59) (2003) 498
Kim, C.-I., *see* Choi, J.-Y., (59) (2003) 244
Kim, C.I., *see* Hwang, I.S., (59) (2003) 461
Kim, C.K., *see* Seong, H.H., (59) (2003) 336
Kim, D.Y., *see* Hyun, S.H., (59) (2003) 1641
Kim, D.Y., *see* Koo, J.M., (59) (2003) 490
Kim, D.-y., *see* Lee, G.-s., (59) (2003) 1949
Kim, H.S., *see* Hyun, S.H., (59) (2003) 1641
Kim, H.S., *see* Koo, J.M., (59) (2003) 490
Kim, H.-s., *see* Lee, G.-s., (59) (2003) 1949
Kim, J.H., *see* Cho, S.K., (59) (2003) 518
Kim, J.H., *see* Yin, X.J., (59) (2003) 294
Kim, M.G., *see* Koo, B.S., (59) (2003) 266
Kim, M.K., *see* Jun, J.H., (59) (2003) 324
Kim, S., *see* Hyun, S.H., (59) (2003) 1641
Kim, T.M., Han, J.Y., Hwang, W.S. and Lim, J.M., Preimplantation development of bovine embryos reconstructed using oocytes having presumptively inactivated chromosome by x-ray irradiation, (59) (2003) 264
Kimura, H., *see* Narita, J., (59) (2003) 276
Kimura, K., *see* Hirako, M., (59) (2003) 526
Kimura, K., *see* Kawaguchi, M., (59) (2003) 528
Kimura, K., *see* Luo, H., (59) (2003) 453
Kind, K.L., *see* Harvey, A.J., (59) (2003) 208
Kindahl, H., *see* Cavestany, D., (59) (2003) 1787
Kindahl, H., *see* Handler, J., (59) (2003) 1381
King, A.L., *see* Harris, R.F., (59) (2003) 448
King, A.L., *see* Pope, C.E., (59) (2003) 308
King, A., *see* Bureau, W., (59) (2003) 239
King, W.A., Poulin, N., Guignot, F., Mermillod, P. and Cognie, Y., Timing of development and sex ratio of in vitro produced goat embryos, (59) (2003) 451
King, W.A., *see* Alexander, B., (59) (2003) 233
King, W.A., *see* Kochhar, H.P.S., (59) (2003) 343
King, W.A., *see* Rho, G.J., (59) (2003) 282
Kirchner, E., *see* Crichton, E.G., (59) (2003) 389
Kirkland, P.D., *see* McGowan, M.R., (59) (2003) 1051
Kirsch, J.D., *see* Grazul-Bilska, A.T., (59) (2003) 1449
Kishi, M., *see* Aoki, S., (59) (2003) 234
Kishi, M., *see* Nishisouzu, T., (59) (2003) 531
Kitamura, S., Nishisouzu, T., Aoki, S., Dochi, O. and Koyama, H., Comparison of the properties of cervical mucus in pregnant and non-pregnant holstein heifers and cows, (59) (2003) 367
Kitamura, S., *see* Aoki, S., (59) (2003) 234
Kitiyanant, Y., Saikhun, J. and Pavasuthipaisit, K., Somatic cell nuclear transfer in domestic cat oocytes treated with IGF-I for in vitro maturation, (59) (2003) 1775
Kitiyanant, Y., Saikhun, J., Jaruansuwan, M. and Pavasuthipaisit, K., Parthenogenetic development of buffalo oocytes after electrical and chemical activation, (59) (2003) 475
Kitiyanant, Y., *see* Saikhun, J., (59) (2003) 284
Kleemann, D.O., *see* Hamilton, H.M., (59) (2003) 255
Kleemann, D.O., *see* Kakar, M.A., (59) (2003) 527
Kleemann, D.O., *see* Kelly, J.M , (59) (2003) 449
Klukowska, J., *see* Bugno, M., (59) (2003) 1597
Knijn, H.M., Gjorret, J.O., Vos, P.L.A.M., Hendriksen, P.J.M., van der Weijden, G.C., Maddox-Hyttel, P. and Dieleman, S.J., Apoptosis in bovine embryos cultured until day 7 post-ovulation after collection at different times of in vivo development, (59) (2003) 325
Knijn, H.M., *see* Vos, P.L.A.M., (59) (2003) 332
Kobayashi, J., Sasaki, A., Watanabe, A., Komine, K., Kuroishi, T., Sasada, H., Kohsaka, T., Takada, N. and Sato, Effect of lactoferrin on motility and capacitation of bovine spermatozoa, (59) (2003) 462
Kobayashi, S., Kaneyama, K. and Saito, N., Effect of co-transfer of blastocysts derived from parthenogenesis with reconstructed embryos from bovine somatic cells, (59) (2003) 376

Kobayashi, S., Kano, M., Takei, M. and Tajima, S., Viability and telomerase activity of porcine embryos vitrified by ultra-rapid cooling method using the open pulled straw, (59) (2003) 304
Kochhar, H.P.S., Lamarre, J. and King, W.A., Effects of interleukin-11 (RHIL-11) on the development, sex ratio and cell number of heat stressed bovine embryos, (59) (2003) 343
Koester, M., *see* Mosslacher, G., (59) (2003) 372
Kohsaka, T., *see* Kobayashi, J., (59) (2003) 462
Kojima, T., *see* Oshima, (59) (2003) 532
Koll, H., *see* Nabiev, D., (59) (2003) 226
Komatsu, M., *see* Oshima, (59) (2003) 532
Komen, J., *see* Viveiros, A.T.M., (59) (2003) 1905
Komine, K., *see* Kobayashi, J., (59) (2003) 462
Komiya, M., *see* Aoki, S., (59) (2003) 234
Konari, A., *see* Hayashi, K., (59) (2003) 1355
Königshofer, M., *see* Handler, J., (59) (2003) 1381
Konishi, M., *see* Ideta, A., (59) (2003) 359
Kono, T., *see* Bao, S., (59) (2003) 1231
Kono, T., *see* Kashiwazaki, N., (59) (2003) 423
Koo, B.S., Son, H.Y., Kim, M.G. and Lee, C.K., Developmental block of bovine–murine interspecies nuclear transferred embryos in vitro, (59) (2003) 266
Koo, D.B., *see* Han, Y.M., (59) (2003) 33
Koo, D.B., *see* Lee, K.K., (59) (2003) 491
Koo, J.M., Kim, D.Y., Hyun, S.H., Kim, H.S., Lee, G.S., Lee, S.H., Kang, S.K., Lee, B.C. and Hwang, W.S., Ultrastructural and developmental comparison of porcine oocytes matured in TCM-199 and mSOF, (59) (2003) 490
Koong, M.K., *see* Jun, J.H., (59) (2003) 324
Korhonen, H., *see* Piltti, K., (59) (2003) 403
Kouimtzis, S., *see* Menegatos, J., (59) (2003) 1533
Kouskoura, T., *see* Menegatos, J., (59) (2003) 1533
Kowalski, A.A., Rodriguez-Sallaberry, C.J., Kramer, J.M. and Moore, K., Steroid receptor expression in the early preimplantation bovine embryo, (59) (2003) 424
Koyama, H., *see* Aoki, S., (59) (2003) 234
Koyama, H., *see* Kitamura, S., (59) (2003) 367
Koyama, H., *see* Narita, M., (59) (2003) 328
Koyama, H., *see* Nishisouzu, T., (59) (2003) 531
Kraft, K.C., *see* Grazul-Bilska, A.T., (59) (2003) 1449
Kramer, J.M., *see* Kowalski, A.A., (59) (2003) 424
Krisher, R.L., *see* Bormann, C.L., (59) (2003) 1373
Krisher, R.L., *see* Herrick, J.R., (59) (2003) 394
Krisher, R.L., *see* Stroble, K.A., (59) (2003) 212
Křivánek, I., *see* Řezáč, P., (59) (2003) 1325
Krivokharchenko, A., *see* Isachenko, V., (59) (2003) 1209
Kroetsch, T., *see* Lessard, C., (59) (2003) 1865
Kruip, T.A.M., Muskens, J., van Roermund, H.J.W., Bakker, D. and Stockhofe-Zurwieden, N., Lack of association of *Mycobacterium avium* subsp. *paratuberculosis* with oocytes and embryos from moderate shedders of the pathogen, (59) (2003) 1651
Kruszyński, W., *see* L|ukaszewicz, E., (59) (2003) 1627
Kubisch, H.M., Rasmussen, T.A. and Loskutoff, N., Interferon-tau secretion by hybrid cattle x bison blastocysts and blastocyst outgrowths, (59) (2003) 425
Kubo, Y., *see* Geshi, M., (59) (2003) 333
Kühholzer-Cabot, B., Huber, E., Huber, C. and Brem, G., In vitro development of rabbit nuclear transfer embryos derived from fetal fibroblast cells exposed to different treatments, (59) (2003) 265
Kunawongkrit, A., *see* Apimeteetumrong, M., (59) (2003) 235
Kung, J.C., *see* Shen, P.C., (59) (2003) 289
Künzi, N., *see* Reist, M., (59) (2003) 1707
Kuo, H.C., *see* Mitalipov, S.M., (59) (2003) 429
Kure-bayashi, S., *see* Nguyen, V.T., (59) (2003) 719
Kuroishi, T., *see* Kobayashi, J., (59) (2003) 462
Kuroiwa, Y., *see* Robl, J.M., (59) (2003) 107
Kurome, M., Fujimura, T., Wako, N., Ochiai, T., Miyazaki, K., Ueda, H., Hasebe, Y., Oshima, K., Murakami, H. and Nagashima, H., Comparison between electro-fusion and intracytoplasmic nuclear injection methods in pig cloning, (59) (2003) 267
Kurome, M., *see* Nagashima, H., (59) (2003) 95
Kuronen, V., *see* Piltti, K., (59) (2003) 403
Kuwayama, M., *see* Bing, Y.Z., (59) (2003) 470
Kuwayama, M., *see* Esaki, R., (59) (2003) 300
Kuwayama, M., *see* Nakata, K., (59) (2003) 275
Kuwayama, M., *see* Ushijima, H., (59) (2003) 316
Kuwayama, M., Birth of a normal calf after transfer of the defective oocyte from old infertile cattle after germinal vesicle transfer, (59) (2003) 268
Kwack, D.O., *see* Ock, S.A., (59) (2003) 464

Lagutina, I., Crotti, G., Colleoni, S., Ponderato, N., Duchi, R., Lazzari, G. and Galli, C., Nuclear transfer in horses, (59) (2003) 269
Lagutina, I., *see* Galli, C., (59) (2003) 599
Lai, L., *see* Pedersen, H.G., (59) (2003) 430
Lai, L., *see* Prather, R.S., (59) (2003) 115
Laible, G., *see* Wells, D.N., (59) (2003) 45

Lainas, T., *see* Gouletsou, P.G., (59) (2003) 1959
Laloy, E., *see* Apimeteetumrong, M., (59) (2003) 235
Laloy, E., *see* Servely, J.L., (59) (2003) 288
Lamarre, J., *see* Kochhar, H.P.S., (59) (2003) 343
Lamb, G.C., *see* Dahlen, C.R., (59) (2003) 1827
Landriscina, R., *see* Mari, G., (59) (2003) 529
Landry, A.M., Echelard, Y., Murakami, M., Collins, M.G., Denniston, R.S. and Godke, R.A., Effect of electrofusion method and time of cleavage on bovine embryo development after blastomere fusion at the 2-cell stage, (59) (2003) 355
Lane, M. and Gardner, D.K., Aspartate and lactate negate the requirement for pyruvate for the first cleavage division in the mouse, (59) (2003) 344
Lane, M., *see* Gardner, D.K., (59) (2003) 407
Lane, M., *see* Hewitt, E.A., (59) (2003) 420
Lane, M., *see* Reed, L.C., (59) (2003) 349
Lane, M., *see* Sheehan, C., (59) (2003) 313
Lane, M., *see* Stilley, K.S., (59) (2003) 459
Langendijk, P., Bouwman, E.G., Schams, D., Soede, N.M. and Kemp, B., Effects of different sexual stimuli on oxytocin release, uterine activity and receptive behavior in estrous sows, (59) (2003) 849
Langendijk, P., *see* Kidson, A., (59) (2003) 1889
Lapointe, J., *see* Baldassarre, H., (59) (2003) 236
Lapointe, J., *see* Baldassarre, H., (59) (2003) 831
Larsen, R.E., *see* Phillips, T.C., (59) (2003) 1441
Larsson, B., *see* Båge, R.B, (59) (2003) 484
Laurincik, J., Avery, B., Müller, M., Schelander, K. and Maddox-Hyttel, P., Embryonic transcription is required for allocation of nucleolar proteins in bovine embryos produced in vitro, (59) (2003) 426
Laurincik, J., *see* Bjerrregaard, B., (59) (2003) 438
Laurincik, J., *see* Faerge, I., (59) (2003) 487
Laurincik, J., *see* Mosslacher, G., (59) (2003) 372
Lavergne, Y., *see* Apimeteetumrong, M., (59) (2003) 235
Lavoir, M.-C., Mather, C., Diamond, J. and Etches, R., Production of chimeric chickens using embryonic stem cells, (59) (2003) 379
Lawrence, J.L., *see* Edwards, J.L., (59) (2003) 250
Lawrence, J.L., *see* Payton, R.R., (59) (2003) 496
Lazaris, A., *see* Baldassarre, H., (59) (2003) 831
Lazaris, A., *see* Keefer, C.L., (59) (2003) 263
Lazzari, G., *see* Galli, C., (59) (2003) 599
Lazzari, G., *see* Lagutina, I., (59) (2003) 269
Le Bourhis, D., *see* Servely, J.L., (59) (2003) 288
Le Gal, F., *see* Ménétrey, F., (59) (2003) 211
Leal, C.L.V., *see* Adona, P.R., (59) (2003) 479
Leal, C.L.V., *see* Adona, P.R., (59) (2003) 480
Leal, C.L.V., *see* Meo, S.C., (59) (2003) 476
Leal, C.L.V., *see* Yamazaki, W., (59) (2003) 293
Leclerc, P., *see* Lessard, C., (59) (2003) 1865
Lecoq, R., *see* Saint Jalme, M., (59) (2003) 875
Ledda, S., Leoni, G., Rosati, I., Berlinguer, F., Pintus, P.P., Bogliolo, L. and Naitana, S., Effect of cadmium on the development and DNA synthesis of mouse embryos cultured in vitro, (59) (2003) 326
Ledda, S., *see* Leoni, G., (59) (2003) 492
Leduc, M., *see* Baldassarre, H., (59) (2003) 831
Leduc, M., *see* Keefer, C.L., (59) (2003) 263
Lee, B.C., *see* Cho, J.K., (59) (2003) 242
Lee, B.C., *see* Hwang, W.S., (59) (2003) 342
Lee, B.C., *see* Hyun, S.H., (59) (2003) 1641
Lee, B.C., *see* Jang, G., (59) (2003) 252
Lee, B.C., *see* Koo, J.M., (59) (2003) 490
Lee, B.-c., *see* Lee, G.-s., (59) (2003) 1949
Lee, C.K., *see* Koo, B.S., (59) (2003) 266
Lee, C.K., *see* Yang, B.-C., (59) (2003) 317
Lee, C., *see* Lee, M.-S., (59) (2003) 383
Lee, D.R., *see* Parks, J.E., (59) (2003) 73
Lee, E.S., *see* Hyun, S.H., (59) (2003) 1641
Lee, E.-s., *see* Lee, G.-s., (59) (2003) 1949
Lee, G.-s., Hyun, S.-h., Kim, H.-s., Kim, D.-y., Lee, S.-h., Lim, J.-m., Lee, E.-s., Kang, S.-k., Lee, B.-c. and Hwang, W.-s., Improvement of a porcine somatic cell nuclear transfer technique by optimizing donor cell and recipient oocyte preparations, (59) (2003) 1949
Lee, G.S., *see* Hyun, S.H., (59) (2003) 1641
Lee, G.S., *see* Koo, J.M., (59) (2003) 490
Lee, H.J., Lee, S.L., Beyhan, Z. and First, N.L., Expression of nuclear lamins A/C in cloned bovine embryos reconstituted with bovine fetal fibroblasts, (59) (2003) 270
Lee, H.J., *see* Cho, S.R., (59) (2003) 243
Lee, H.J., *see* Ock, S.A., (59) (2003) 464
Lee, H.S., *see* Lee, K.K., (59) (2003) 491
Lee, H.-J., *see* Lee, M.-S., (59) (2003) 383
Lee, J.D., *see* Shiue, Y.L., (59) (2003) 380
Lee, J.S., *see* Park, H.S., (59) (2003) 278
Lee, J.-W., Dinnyes, A. and Yang, X., Development of transgenic embryos following injection of freeze-dried sperm in pigs, (59) (2003) 305
Lee, K.K., Lee, H.S., Wee, K.I., Park, J.S., Han, J.S., Koo, D.B., Kang, Y.K. and Han, Y.M., Effect of sphingosine-1-phosphat on in vitro maturation of porcine oocytes, (59) (2003) 491
Lee, K.K., *see* Han, Y.M., (59) (2003) 33
Lee, M.Y., *see* Park, H.S., (59) (2003) 278
Lee, M.-S., Hwang, I-T., Im, K.-S., Lee, C. and Lee, H.-J., The impacts of xenoestrogens on mouse embryos and human endometrial pithelial cells in vitro, (59) (2003) 383

Lee, O.K., *see* Lee, Y.W., (59) (2003) 396
Lee, R.S-F., *see* Peterson, A.J., (59) (2003) 687
Lee, S.H., *see* Hyun, S.H., (59) (2003) 1641
Lee, S.H., *see* Koo, J.M., (59) (2003) 490
Lee, S.-h., *see* Lee, G.-s., (59) (2003) 1949
Lee, S.L., *see* Lee, H.J., (59) (2003) 270
Lee, S.M., *see* Shiue, Y.L., (59) (2003) 380
Lee, S.N., *see* Shen, P.C., (59) (2003) 289
Lee, Y.W., Shim, Y.H., Shin, H.J., Lee, O.K., Choi, W.I., Chang, D.W. and Shin, S.T., Relationship of umbilical blood flow to growth parameters in the Korean black goat fetus, (59) (2003) 396
Leese, H.J., *see* Eckert, J.J., (59) (2003) 319
Lehn-Jensen, H., *see* Boe-Hansen, G.B., (59) (2003) 439
Leibo, S.P., *see* VandeVoort, C.A., (59) (2003) 699
Lemcke, B., *see* Tatham, B.G., (59) (2003) 404
Lemme, E., *see* Lucas-Hahn, A., (59) (2003) 356
Lende, T.v.d., *see* van Rens, B.T.T.M., (59) (2003) 915
León, *see* Rodriguez, C., (59) (2003) 478
Leoni, G., Rosati, I., Berlinguer, F., Pintus, P.P., Bogliolo, L., Ledda, S. and Naitana, S., Activity of maturation promoting factor (MPF) and mitogen-activated protein kinase (MAPK) during in vitro maturation of expanded or compact horse cumulus–oocyte complexes, (59) (2003) 492
Leoni, G., *see* Ledda, S., (59) (2003) 326
Lessard, C., Masseau, I., Bilodeau, J.-F.V., Kroetsch, T., Twagiramungu, H., Bailey, J.L., Leclerc, P. and Sullivan, R., Semen characteristics of genetically identical quadruplet bulls, (59) (2003) 1865
Leu, N.A., *see* Eckardt, S., (59) (2003) 249
Leuenberger, H., *see* Reist, M., (59) (2003) 1707
Leveillee, C., *see* Bureau, W., (59) (2003) 239
Lewis, I., *see* Brockway, A., (59) (2003) 460
L'Huillier, P.J., *see* Wells, D.N., (59) (2003) 45
Li, G.-P., Seidel Jr., G.E. and Squires, E.L., Intracytoplasmic sperm injection of bovine oocytes with stallion spermatozoa, (59) (2003) 1143
Li, Y., *see* Si, W., (59) (2003) 314
Liem, H., *see* Destrempes, M.M., (59) (2003) 245
Liinamo, A.-E., *see* van Arendonk, J.A.M., (59) (2003) 563
Lim, C.K., *see* Jun, J.H., (59) (2003) 324
Lim, J.M., *see* Cho, J.K., (59) (2003) 242
Lim, J.M., *see* Hwang, W.S., (59) (2003) 342
Lim, J.M., *see* Hyun, S.H., (59) (2003) 1641
Lim, J.M., *see* Kim, T.M., (59) (2003) 264
Lim, J.-m., *see* Lee, G.-s., (59) (2003) 1949
Lim, J.M., *see* Park, E.S., (59) (2003) 248
Lima, A.S., Nicacio, A.C., Tavares, L.M.T., Assumpcao, M.E.O.A., Mello, M.R.B., Magnusson, V., Oliveira, V.P., Marques, M.G., Mendes, C.M. and Visintin, J.A., In vitro oocyte fertilization, polyspermy and embryo development in pigs in three different media, (59) (2003) 452
Lima, A.S., *see* Assumpcao, M.E.O.A., (59) (2003) 297
Lima, P.F., *see* Andrade, J.C.O., (59) (2003) 358
Lima, P.F., *see* Oliveira, D.F.F., (59) (2003) 375
Lima, P.F., *see* Taveiros, A.W., (59) (2003) 377
Lin, H.H., *see* Shen, P.C., (59) (2003) 289
Lindeberg, H., Aalto, J., Oksman, M., Nieminen, M. and Valtonen, M., Embryo transfer in the semi-domesticated reindeer (*rangifer tarandus fennicus*), (59) (2003) 368
Lindeberg, H., *see* Piltti, K., (59) (2003) 403
Linde-Forsberg, C., *see* Peter, A.T., (59) (2003) 1525
Lindsey, A.C., Muckle, L.K. and Squires, E.L., Effects of caffeine stimulation on stallion sperm motion characteristics following 18-H storage, flow-sorting, and cryopreservation, (59) (2003) 510
Lindsey, A.C., *see* Brinsko, S.P., (59) (2003) 1001
Lindsey, B.R., *see* Rozeboom, K.J., (59) (2003) 229
Linke, R., *see* Hill, J., (59) (2003) 258
Liow, S.L., *see* Chen, N.Q., (59) (2003) 472
Liu, I.K.M., *see* Carneiro, G.F., (59) (2003) 485
Liu, J.-L., Sung, L.-Y., Du, F., Julian, M., Jiang, S., Barber, M., Xu, J., Tian, X.C. and Yang, X., Differential development of rabbit embryos derived from parthenogenesis and nuclear transfer, (59) (2003) 271
Liu, X.-H., *see* Zhang, T., (59) (2003) 1545
Liu, Z.H., Yue, K.Z., Ma, S.F., Sun, X.S. and Tan, J.H., Effects of pregnant mare serum gonadotropin (eCG) on follicle development and granulosa-cell apoptosis in the pig, (59) (2003) 775
Loi, P., *see* Fulka Jr., J., (59) (2003) 1879
Lonergan, P., Gutierrez-Adan, A., Rizos, D., Pintado, B., de la Fuente, J., Wade, M. and Boland, M.P., Relative messenger RNA abundance in bovine oocytes collected at the LH surge and matured in vitro or their counterparts matured in vivo, (59) (2003) 493
Lonergan, P., *see* Papadopoulos, S., (59) (2003) 458
Lonergan, P., *see* Rizos, D., (59) (2003) 350
Lonergan, P., *see* Ward, F., (59) (2003) 1575

Long, C.R., Walker, S.C., Tang, R.T. and Westhusin, M.E., New commercial opportunities for advanced reproductive technologies in horses, wildlife, and companion animals, (59) (2003) 139
Long, L., *see* Zuelke, K., (59) (2003) 435
Lopes, A.S., Ottosen, L.D.M., Greve, T. and Callesen, H., Microsensor oxygen measurements around in-vitro developing cattle embryos: preliminary observations, (59) (2003) 345
López Escribano, N., *see* Ferré, L.B., (59) (2003) 301
Lopez, M., *see* Palasz, A.T., (59) (2003) 402
López-Gatius, F., Yániz, J. and Madriles-Helm, D., Effects of body condition score and score change on the reproductive performance of dairy cows: a meta-analysis, (59) (2003) 801
Lorenzo, P.L., *see* Picazo, R.A., (59) (2003) 412
Lorimer, M.F., *see* Kakar, M.A., (59) (2003) 527
Loskutoff, N., *see* Kubisch, H.M., (59) (2003) 425
Loskutoff, N.M., Morfeld, K.A. and Crichton, E.G., Trypsin activity after prolonged refrigerated storage, (59) (2003) 384
Loskutoff, N.M., *see* Crichton, E.G., (59) (2003) 389
Loskutoff, N.M., *see* Morfeld, K.A., (59) (2003) 400
Lott, J.D., *see* Sirisathien, S., (59) (2003) 1751
LoTurco, E.G., *see* Avelino, K.B., (59) (2003) 483
Love, C.C., *see* Brinsko, S.P., (59) (2003) 735
Love, C.C., *see* Brinsko, S.P., (59) (2003) 1001
Love, C.C., *see* Choi, Y.-H., (59) (2003) 1219
Love, C.C., *see* Love, L.B., (59) (2003) 765
Love, L.B., Choi, Y.H., Love, C.C., Varner, D.D. and Hinrichs, K., Effect of ovary storage and oocyte transport method on maturation rate of horse oocytes, (59) (2003) 765
Love, L.B., *see* Choi, Y.-H., (59) (2003) 1219
Lu, K., *see* Matsumoto, K., (59) (2003) 428
Lucas, X., *see* Cremades, T., (59) (2003) 298
Lucas-Hahn, A., Lemme, E., Wrenzycki, C. and Niemann, H., In vitro production of bovine androgenetic embryos, (59) (2003) 356
Lucena, A., *see* Lucena, E., (59) (2003) 272
Lucena, C., *see* Lucena, E., (59) (2003) 272
Lucena, E., Mojica, S., Bernal, D., Esteban, C., Lucena, C., Moran, A., Rojas, A., Botero, F., Lucena, A. and Suarez, Z., Monogenic procreation of a native colombian porcine breed, (59) (2003) 272
Luciano, A.M., *see* Abdoon, A.S.S., (59) (2003) 481
Lucy, M.C., *see* Hasler, J.F., (59) (2003) 1919
Lugilde, L.L., *see* Peña, A.I., (59) (2003) 1725
Łukaszewicz, E. and Kruszyński, W., Evaluation of fresh and frozen-thawed semen of individual ganders by assessment of spermatozoa motility and morphology, (59) (2003) 1627
Lund, A., *see* Crichton, E.G., (59) (2003) 389
Lundeheim, N., *see* Gil, J., (59) (2003) 1157
Lundeheim, N., *see* Gil, J., (59) (2003) 1241
Luo, H., Kimura, K. and Hirako, M., Effect of vascular endothelial growth factor on the development of bovine embryos cultured in serum-free media, (59) (2003) 453
Luznar, S., *see* Bartolome, J., (59) (2003) 1991

Ma, S.F., *see* Liu, Z.H., (59) (2003) 775
MacDonald, C., *see* Druery, G.V., (59) (2003) 391
Maclellan, L.J., Bass, L.D., McCue, P.M. and Squires, E.L., Effect of cooling large and small equine embryos prior to cryopreservation on pregnancy rates after transfer, (59) (2003) 306
Maclellan, L.J., *see* Carnevale, E.M., (59) (2003) 362
Macmillan, K., *see* Brockway, A., (59) (2003) 460
Maddocks, S., *see* Hamilton, H.M., (59) (2003) 255
Maddocks, S., *see* Kakar, M.A., (59) (2003) 527
Maddox-Hyttel, P., Peura, T.T., Hartwich, K.M., Engbjerg, L., Rasmussen, C. and Walker, S.K., Post-hatching development of nuclear transfer, in vitro-cultured and in vivo-grown ovine embryos, (59) (2003) 273
Maddox-Hyttel, P., *see* Bjerrregaard, B., (59) (2003) 438
Maddox-Hyttel, P., *see* Gjorret, J.O., (59) (2003) 322
Maddox-Hyttel, P., *see* Knijn, H.M., (59) (2003) 325
Maddox-Hyttel, P., *see* Laurincik, J., (59) (2003) 426
Madison, *see* Clark, S.G., (59) (2003) 441
Madrid-Bury, N., *see* Jimenez, A., (59) (2003) 509
Madriles-Helm, D., *see* López-Gatius, F., (59) (2003) 801
Maes, D., *see* De Pauw, I.M.C., (59) (2003) 1109
Maes, D., *see* Van Soom, A., (59) (2003) 352
Magistrini, M., *see* Douard, V., (59) (2003) 753
Magnusson, V., *see* Assumpcao, M.E.O.A., (59) (2003) 297
Magnusson, V., *see* Lima, A.S., (59) (2003) 452
Mahabir, E., *see* Nabiev, D., (59) (2003) 226
Mahla, R., *see* Moussa, M., (59) (2003) 1615
Majumdar, A.C., *see* Selvaraju, S., (59) (2003) 1459
Malakooti, N., *see* Roh, S., (59) (2003) 283
Mamo, S., Wimmers, K., Gilles, M., Srinivas, K., Schellander, K. and Ponsuksili, S., Identification and chromosomal allocation of ESTs derived from in vitro-produced cattle embryo developmental stage ranges, (59) (2003) 427
Manabe, N., *see* Nakayama, M., (59) (2003) 411

Mao, J., *see* Caamano, J.N., (59) (2003) 361
Mao, J., Smith, M.F., Didion, B.A., Wu, G., McCauley, T.C., Cantley, T.C., Prather, R.S., McDaniel, M. and Day, B.N., Effect of IGF-I and EGF on porcine preantral follicular growth and development, (59) (2003) 410
Mapletoft, R.J., *see* Colazo, M.G., (59) (2003) 215
Mapletoft, R.J., *see* Kastelic, J.P., (59) (2003) 223
Mapletoft, R.J., *see* Martínez, M.F., (59) (2003) 224
Mapletoft, R.J., *see* Nasser, L.F., (59) (2003) 530
Mari, G., Iacono, E., Merlo, B., Casero, R., Landriscina, R. and Belluzzi, S., Superovulation in cattle using subcutaneous osmotic pumps, (59) (2003) 529
Marques Junior, A.P., *see* Viana, J.H.M., (59) (2003) 415
Marques, M.G., *see* Lima, A.S., (59) (2003) 452
Marques, M.O., Nasser, L.F., Silva, R.C.P., Bo, G.A. and Baruselli, P.S., Increased pregnancy rates in *Bos taurus* × *Bos indicus* embryo recipients with treatments to increase plasma progesterone concentrations, (59) (2003) 369
Marques, M.O., *see* Baruselli, P.S., (59) (2003) 214
Marques, M.O., *see* Nasser, L.F., (59) (2003) 530
Martinez, E.A., *see* Caamano, J.N., (59) (2003) 361
Martinez, E.A., *see* Cremades, T., (59) (2003) 298
Martinez, E.A., *see* Day, B.N., (59) (2003) 213
Martinez, E.A., *see* Vazquez, J.M., (59) (2003) 1605
Martinez, F., *see* Anel, L., (59) (2003) 386
Martinez, F., *see* Martinez-Pastor, F., (59) (2003) 397
Martinez-Pastor, F., Anel, E., Alvarez, M., Boixo, J.C., Chamorro, C., Garde, J.J., Diaz, A., Martinez, F., Borragan, S. and Anel, L., A rapid test for urospermia detection in electroejaculates from several species, (59) (2003) 397
Martinez-Pastor, F., *see* Diaz, A., (59) (2003) 217
Martinez-Pastor, F., *see* Garcia-Macias, (59) (2003) 220
Martinez-Pastor, F., *see* Paz, P., (59) (2003) 228
Martínez, M.F., Colazo, M.G., Kastelic, J.P. and Mapletoft, R.J., Effects of estradiol and progesterone on plasma steroid and gonadotropin concentrations in CIDR-treated ovariectomized cows, (59) (2003) 224
Martínez, M.F., *see* Gavaga, Q.A., (59) (2003) 221
Martínez, M.F., *see* Kastelic, J.P., (59) (2003) 223
Mason, J.B., *see* Bertolini, M., (59) (2003) 416
Masseau, I., *see* Lessard, C., (59) (2003) 1865
Matango, N.R., *see* Dong, Y.J., (59) (2003) 246
Matás, C., Gardón, J.C., Tartaglione, M. and Gadea, J., Study of presence of cumulus–oocyte complexes on functional changes on argentine creole patagonic bovine spermatozoa, (59) (2003) 463
Matas, C., *see* Garcia, E., (59) (2003) 519
Mateusen, B., *see* Van Soom, A., (59) (2003) 352
Mather, C., *see* Lavoir, M.-C., (59) (2003) 379
Mathias, K., *see* Day, B.N., (59) (2003) 213
Matsui, T., *see* Nakayama, M., (59) (2003) 411
Matsukawa, K., *see* Akagi, S., (59) (2003) 232
Matsukawa, K., Takahashi, S., Adachi, N., Akagi, S. and Hanada, A., Effect of activation treatment for equine oocytes after ICSI and subsequent embryo's freezability, (59) (2003) 454
Matsumoto, K., *see* Hosoi, Y., (59) (2003) 408
Matsumoto, K., *see* Saeki, K., (59) (2003) 468
Matsumoto, K., Zhang, M., Yamamoto, Y., Saeki, K., Hosoi, Y., Lu, K. and Iritani, A., Molecular cloning and characterization of a novel gene specifically expressed in gonad, (59) (2003) 428
Maxwell, W.M.C., Hollinshead, F.K., Rath, D., O'Brien, J.K. and Evans, G., Effect of dose of sperm processed for sex-sorting and cryopreservation on fertility in ewes, (59) (2003) 511
Maxwell, W.M.C., *see* Hollinshead, F.K., (59) (2003) 209
Maxwell, W.M.C., *see* Morris, L.H.A., (59) (2003) 512
McCauley, T.C., *see* Caamano, J.N., (59) (2003) 361
McCauley, T.C., *see* Mao, J., (59) (2003) 410
McCorkell, R.B., *see* Kemp, K.E., (59) (2003) 395
McCorkell, R.B., Woodbury, M. and Adams, G.P., Follicle development in wapiti during the estrous cycle, (59) (2003) 398
McCue, P.M., *see* Maclellan, L.J., (59) (2003) 306
McCue, P.M., *see* Squires, E.L., (59) (2003) 151
McDaniel, M., *see* Mao, J., (59) (2003) 410
McEvoy, T.G., *see* Mitchell, L.M., (59) (2003) 347
McGarry, M., *see* Gao, S., (59) (2003) 253
McGarry, M., *see* Pallante, B., (59) (2003) 277
McGowan, M.R., Kafi, M., Kirkland, P.D., Kelly, R., Bielefeldt-Ohmann, H., Occhio, M.D. and Jillella, D., Studies of the pathogenesis of bovine pestivirus-induced ovarian dysfunction in superovulated dairy cattle, (59) (2003) 1051
McIlfatrick, S.M., *see* Grupen, C.G., (59) (2003) 447
McLaughlin, K.J., *see* Eckardt, S., (59) (2003) 249
McMillen, I.C., *see* Hartwich, K.M., (59) (2003) 256
McWhir, J., *see* Gao, S., (59) (2003) 253
Meade, H.M., *see* Behboodi, E., (59) (2003) 237
Meade, H.M., *see* Destrempes, M.M., (59) (2003) 245
Meade, H.M., *see* Memili, E., (59) (2003) 274
Mecif, K., *see* El Amiri, B., (59) (2003) 1291
Medina, M., *see* Panarace, M., (59) (2003) 513

Medvedev, S. Yu., Fuchimoto, D., Onishi, A. and Nagai, T., Distinguishable fate of blastomeres of the two-cell pig embryo: lineage tracing studies, (59) (2003) 327
Megee, S., *see* Honaramooz, A., (59) (2003) 536
Meikle, A., *see* Cavestany, D., (59) (2003) 1787
Meirelles, F., *see* Yamazaki, W., (59) (2003) 293
Meirelles, F.V., *see* Avelino, K.B., (59) (2003) 483
Melican, D., Blash, S. and Gavin, W., Caprine in vitro fertilization utilizing cryopreserved epididymal sperm from a 4-month-old transgenic buck, (59) (2003) 455
Melican, D., *see* Butler, R.E., (59) (2003) 240
Melican, D., *see* Gavin, W., (59) (2003) 254
Mello, M.R.B., *see* Assumpcao, M.E.O.A., (59) (2003) 297
Mello, M.R.B., *see* Lima, A.S., (59) (2003) 452
Melo de Sousa, N., *see* El Amiri, B., (59) (2003) 1291
Melo, C., *see* Salamone, D.F., (59) (2003) 285
Memili, E., Behboodi, E., Overton, S.A., O'Coin, M., Zahedi, A., Meade, H.M. and Echelard, Y., Synchronization of goat fibroblast cells at quiescent stage and determination of their transition from G0 to G1 by detection of cyclin D1 MRNA, (59) (2003) 274
Memili, E., *see* Behboodi, E., (59) (2003) 237
Mendes, C.M., *see* Lima, A.S., (59) (2003) 452
Menegati, J.A., *see* Nasser, L.F., (59) (2003) 530
Menegatos, J., Chadio, S., Kalogiannis, T., Kouskoura, T. and Kouimtzis, S., Endocrine events during the periestrous period and the subsequent estrous cycle in ewes after estrus synchronization, (59) (2003) 1533
Ménétrey, F., Le Gal, F., Hasan, L., Neuenschwander, S. and Stranzinger, G.F., Effect of the 1:29 Robertsonian translocation on the segregation and in vitro development of bovine blastocysts, (59) (2003) 211
Meo, S.C., Leal, C.L.V., Yamazaki, W., Perecin, F., Esper, C.R. and Garcia, J.M., Cortical granules dynamics in borine oocytes activated with strontium, ionomycin and 6-DMAP, (59) (2003) 476
Meo, S.C., *see* Yamazaki, W., (59) (2003) 293
Merlo, B., *see* Mari, G., (59) (2003) 529
Mermillod, P., *see* Cognié, Y., (59) (2003) 171
Mermillod, P., *see* King, W.A., (59) (2003) 451
Merrell, B., *see* Bari, F., (59) (2003) 1265
Merton, J.S., de Roos, A.P.W., Mullaart, E., de Ruigh, L., Kaal, L., Vos, P.L.A.M. and Dieleman, S.J., Factors affecting oocyte quality and quantity in commercial application of embryo technologies in the cattle breeding industry, (59) (2003) 651
Merton, J.S., Vermeulen, Z.L., Otter, T., Mullaart, E. and de Ruigh, L., A combined morphological evaluation of in vitro produced bovine embryos at days 6 and 7 of culture, enhances discrimination in embryo quality with regard to pregnancy rate, (59) (2003) 346
Michel, A., *see* Irons, P.C., (59) (2003) 222
Miki, H., Ogonuki, N., Inoue, K., Yamamoto, Y., Noguchi, Y., Takano, K., Mochida, K. and Ogura, A., Microinsemination with first-wave spermatogenic cells from immature male mice, (59) (2003) 521
Miki, H., *see* Nakata, K., (59) (2003) 275
Miller, A.L., *see* Wells, D.N., (59) (2003) 45
Miller, F., *see* Damiani, P., (59) (2003) 390
Miller, F., *see* Wirtu, G., (59) (2003) 354
Miller-Butterworth, C., *see* Bartels, P., (59) (2003) 387
Miller, L.R., *see* Dahlen, C.R., (59) (2003) 1827
Min, D.M., *see* Jun, J.H., (59) (2003) 324
Min, K.S., *see* Seong, H.H., (59) (2003) 336
Minami, N., *see* Hoshino, Y., (59) (2003) 260
Minamihashi, A., *see* Hirayama, H., (59) (2003) 508
Minamihashi, A., *see* Sawai, K., (59) (2003) 433
Mintiens, K., *see* De Pauw, I.M.C., (59) (2003) 1093
Mintiens, K., *see* Yuan, Y.Q., (59) (2003) 1585
Mirabella, N., Squillacioti, C., Varricchio, E., Genovese, A. and Paino, G., Innervation of vas deferens and accessory male genital glands in the water buffalo (*Bubalus bubalis*). Neurochemical characteristics and relationships to the reproductive activity, (59) (2003) 1999
Miragaya, M.H., *see* Neild, D.M., (59) (2003) 1693
Miró, J., *see* Quintero-Moreno, A., (59) (2003) 1973
Misra, A.K. and Pant, H.C., Estrus induction following PGF2α treatment in the superovulated buffalo (*Bubalus bubalis*), (59) (2003) 1203
Misumi, K., *see* Fujino, Y., (59) (2003) 302
Mitalipov, S.M., Kuo, H.C. and Wolf, D.P., Oct-4 expression in rhesus monkey IVF or somatic cell nuclear transfer (NT) embryos and embryonic stem (ES) cells, (59) (2003) 429
Mitani, T., Enosawa, S., Takahashi, N., Sakuragawa, N. and Suzuki, S., Rodent model of gene and cell transplantation to fetal rat liver by in-utero manipulation for fetal therapy, (59) (2003) 537
Mitchell, L.M., Staines, M.E. and McEvoy, T.G., Effect of vitamin B12 on the in vitro maturation and development of ovine oocytes, (59) (2003) 347
Miyake, M., *see* Hoshino, Y., (59) (2003) 260
Miyake, M., *see* Isaji, M., (59) (2003) 474

Miyake, M., *see* Katayama, M., (59) (2003) 520
Miyake, M., *see* Nguyen, V.T., (59) (2003) 719
Miyake, M., *see* Thuan, N.V., (59) (2003) 351
Miyake, M., *see* Okada, K., (59) (2003) 477
Miyamoto, A., *see* Hayashi, K., (59) (2003) 1355
Miyamoto, A., *see* Ideta, A., (59) (2003) 359
Miyamoto, H., *see* Nakayama, M., (59) (2003) 411
Miyamoto, K., *see* Yonemura, I., (59) (2003) 378
Miyano, T., Bringing up small oocytes to eggs in pigs and cows, (59) (2003) 61
Miyano, T., *see* Hosoi, Y., (59) (2003) 408
Miyano, T., *see* Ogushi, S., (59) (2003) 495
Miyano, T., *see* Okada, K., (59) (2003) 477
Miyano, T., *see* Senbon, S., (59) (2003) 414
Miyano, T., *see* Thuan, N.V., (59) (2003) 351
Miyano, T., *see* Villa-Diaz, L.G., (59) (2003) 502
Miyashita, N., Shiga, K., Fujita, T., Umeki, H., Sato, W., Suzuki, T. and Nagai, T., Normal telomere lengths of spermatozoa in somatic cell-cloned bulls, (59) (2003) 1557
Miyazaki, K., *see* Kurome, M., (59) (2003) 267
Mizuno, J., *see* Nakata, K., (59) (2003) 275
Mochida, K., *see* Miki, H., (59) (2003) 521
Mochida, K., *see* Ogura, A., (59) (2003) 87
Modlinska, M.K., *see* Modlinski, J.A., (59) (2003) 357
Modlinski, J.A., Gorniewska, M., Modlinska, M.K., Reed, M.A., Wagner, T.E. and Karasiewicz, J., Trophoblastic vesicles as putative carriers of mouse embryonic stem cells, (59) (2003) 357
Mojica, S., *see* Lucena, E., (59) (2003) 272
Molina, J.A., *see* Faber, D.C., (59) (2003) 125
Molnar, M., *see* Pribenszky, C., (59) (2003) 329
Monson, R.L., *see* Fischer-Brown, A.E., (59) (2003) 364
Montag, M., *see* Giller, H., (59) (2003) 473
Moor, R.M., *see* Fulka Jr., J., (59) (2003) 1879
Moore, K., *see* Kowalski, A.A., (59) (2003) 424
Moran, A., *see* Lucena, E., (59) (2003) 272
Morato, R.G., Wildt, D. and Spindler, R.E., Effects of medium-term storage of jaguar sperm prior to cryopreservation, (59) (2003) 399
Moreira, F., *see* Cavestany, D., (59) (2003) 1787
Moreira-Filho, C.A., *see* Alves, B.C.A., (59) (2003) 1415
Morel, C., *see* Reist, M., (59) (2003) 1707
Moreno, D., Cutaia, L., Tribulo, R., Caccia, M., Tribulo, H., Chesta, P., Villata, M.L. and Bo, G.A., Fixed-time embryo transfer in cows treated with progesterone vaginal devices and induced to ovulate with estradiol benzoate or HCG, (59) (2003) 370
Moreno, D., *see* Cutaia, L., (59) (2003) 216
Morfeld, K.A., *see* Loskutoff, N.M., (59) (2003) 384
Morfeld, K.A., Skidmore, J.A., Billah, A.M. and Loskutoff, N.M., Effect of various cryoprotectants and methods for the short- and long-term preservation of sperm from the dromedary camel (*camelus dromedarius*), (59) (2003) 400
Mori, T., *see* Kato-Mori, Y., (59) (2003) 334
Mori, T., Ishikawa, A., Katagiri, S., Suzuki, K. and Takahashi, Y., Estradiol production by porcine parthenogenetic embryos during early pregnancy, (59) (2003) 371
Morita, S., *see* Aoki, S., (59) (2003) 234
Moriyasu, S., *see* Hirayama, H., (59) (2003) 508
Moriyasu, S., *see* Sawai, K., (59) (2003) 433
Morris, L.H.A., Hollinshead, F.K., Evans, G. and Maxwell, W.M.C., The longevity and acrosome status of stallion flow sorted spermatozoa, (59) (2003) 512
Morrison, J.R., *see* Roh, S., (59) (2003) 283
Morrow, C.J. and Berg, M., Ultrasound-guided transvaginal collection of amniotic and/or allantoic fluid from cattle, (59) (2003) 539
Mosslacher, G., Besenfelder, U., Gilles, M., Rings, F., Schneider, H., Koester, M., Laurincik, J., Hyttel, P., Brem, G. and Schellander, K., Endoscopic collection of bovine embryos at different tubal stages with respect to FSH and ECG treatment, (59) (2003) 372
Motlik, J., *see* Herrmann, D., (59) (2003) 419
Moussa, M., Duchamp, G., Bruyas, J.-F. and Daels, P.F., Effect of embryo age on viability of equine embryos after cold storage in two systems, (59) (2003) 373
Moussa, M., Duchamp, G., Mahla, R., Bruyas, J.-F. and Daels, P.F., In vitro and in vivo comparison of Ham's F-10, Emcare holding solution and ViGro holding plus for the cooled storage of equine embryos, (59) (2003) 1615
Mtango, N.R., Varisanga, M.D., Dong, Y.J., Rajamahendran, R. and Suzuki, T., Growth factors and growth hormone enhance in vitro embryo production and post-thaw survival of vitrified bovine blastocysts, (59) (2003) 1393
Mtango, N.R., Varisanga, M.D., Juan, D.Y. and Suzuki, T., Development to blastocysts stage of pig oocytes matured, fertilized and electroactivated in vitro, (59) (2003) 456
Muckle, L.K., *see* Lindsey, A.C., (59) (2003) 510
Mukhufhi, N., *see* Irons, P.C., (59) (2003) 222
Mullaart, E., *see* Merton, J.S., (59) (2003) 346
Mullaart, E., *see* Merton, J.S., (59) (2003) 651
Müller, K., *see* Zeuner, A., (59) (2003) 1421
Müller, M., *see* Laurincik, J., (59) (2003) 426
Müller, S., *see* Hiendleder, S., (59) (2003) 257

Munar, C., *see* Salamone, D.F., (59) (2003) 285
Muñoz, J., *see* Picazo, R.A., (59) (2003) 412
Murakami, H., *see* Kurome, M., (59) (2003) 267
Murakami, H., *see* Nagashima, H., (59) (2003) 95
Murakami, M., *see* Landry, A.M., (59) (2003) 355
Muro, J., *see* Garcia-Macias, (59) (2003) 220
Murray, A., *see* Bari, F., (59) (2003) 1265
Murray, J., *see* Fieni, F., (59) (2003) 1515
Muskens, J., *see* Kruip, T.A.M., (59) (2003) 1651

Na Chiengmai, A., *see* Techakumphu, M., (59) (2003) 540
Nabiev, D., Gilles, M., Schneider, H., Mahabir, E., Wimmers, K., Ponsuksili, S., Koll, H. and Schellander, K., Comparison of AndroMed® and TRIS-egg yolk extender bovine post-thaw sperm function parameters and in vitro fertility, (59) (2003) 226
Nagai, T., *see* Bing, Y.Z., (59) (2003) 470
Nagai, T., *see* Bing, Y.Z., (59) (2003) 863
Nagai, T., *see* Dinnyes, A., (59) (2003) 299
Nagai, T., *see* Fuchimoto, D., (59) (2003) 418
Nagai, T., *see* Iwamoto, M., (59) (2003) 261
Nagai, T., *see* Kikuchi, K., (59) (2003) 450
Nagai, T., *see* Miyashita, N., (59) (2003) 1557
Nagai, T., *see* Nguyen, V.T., (59) (2003) 719
Nagai, T., *see* Somfai, T., (59) (2003) 498
Nagai, T., *see* Medvedev, S. Yu., (59) (2003) 327
Nagao, Y., *see* Horii, T., (59) (2003) 1257
Nagao, Y., *see* Hoshino, Y., (59) (2003) 260
Nagashima, H., Fujimura, T., Takahagi, Y., Kurome, M., Wako, N., Ochiai, T., Esaki, R., Kano, K., Saito, S., Okabe, M. and Murakami, H., Development of efficient strategies for the production of genetically modified pigs, (59) (2003) 95
Nagashima, H., *see* Esaki, R., (59) (2003) 300
Nagashima, H., *see* Kurome, M., (59) (2003) 267
Nagashima, H., *see* Nakata, K., (59) (2003) 275
Nagashima, H., *see* Ushijima, H., (59) (2003) 316
Nagata, Y., *see* Saeki, K., (59) (2003) 468
Nagy, E., Bali Papp, A., Nanassy, L., Ordog, V., Nemenyi, M., Dohy, J. and Ivancsics, J., Evaluation by environmental scanning electron microscopy (ESEM) of pig oocytes matured and fertilized in vitro, (59) (2003) 494
Naitana, S., *see* Ledda, S., (59) (2003) 326
Naitana, S., *see* Leoni, G., (59) (2003) 492
Nakai, M., Kashiwazaki, N., Takizawa, A., Hayashi, Y., Nakatsukasa, E., Fuchimoto, D., Noguchi, J., Kaneko, H., Shino, M. and Kikuchi, K., Fertilization and development to piglets by intracytoplasmic sperm head injection into porcine oocytes matured in vitro, (59) (2003) 522
Nakamura, F., *see* Kato-Mori, Y., (59) (2003) 334
Nakamura, H., *see* Bing, Y.Z., (59) (2003) 863
Nakane, T., *see* Ushijima, H., (59) (2003) 316
Nakata, K., Miki, H., Yamazaki, T., Aono, F., Mizuno, J., Kuwayama, M., Kato, O. and Nagashima, H., Production of normal offspring from mouse oocytes reconstructed by germinal vesicle replacement, (59) (2003) 275
Nakatsukasa, E., *see* Nakai, M., (59) (2003) 522
Nakayama, M., Manabe, N., Inoue, N., Matsui, T. and Miyamoto, H., The expression and localization of tumor necrosis factor (TNF)α, TNFα receptor (TNFR) 2 and TNFR-associated factor 2 during follicular atrsia in pig ovaries, (59) (2003) 411
Nanassy, L., *see* Nagy, E., (59) (2003) 494
Narita, J., Takada, T., Kimura, H., Terao, K., Sakuragawa, N. and Torii, R., Cynomolgus monkey blastocysts produced by nuclear transfer using amniotic epithelial cells, (59) (2003) 276
Narita, M., Dochi, O. and Koyama, H., Developmental ability of blastomeres separated from two-, four-, and eight-cell in vitro-produced bovine embryos, (59) (2003) 328
Nascimento, A.B., *see* Seneda, M.M., (59) (2003) 1435
Nasser, L.F., Bo, G.A., Reis, E.L., Menegati, J.A., Marques, M.O., Mapletoft, R.J. and Baruselli, P.S., Superovulatory response during the first follicular wave in nelore (*Bos indicus*) donors, (59) (2003) 530
Nasser, L.F., *see* Baruselli, P.S., (59) (2003) 214
Nasser, L.F., *see* Marques, M.O., (59) (2003) 369
Nawito, M.F., *see* Abdoon, A.S.S., (59) (2003) 481
Nawroth, F., *see* Isachenko, V., (59) (2003) 1209
Nedambale, T.L., Chaubal, S.A., Du, F., Groen, W., Faber, D.C., Dinnyes, A. and Yang, X., Vitrification methods for cryopreservation of in vitro produced cattle embryos, (59) (2003) 307
Neglia, G., Gasparrini, B., Caracciolo di Brienza, V., Di Palo, R., Campanile, G., Antonio Presicce, G. and Zicarelli, L., Bovine and buffalo in vitro embryo production using oocytes derived from abattoir ovaries or collected by transvaginal follicle aspiration, (59) (2003) 1123
Neglia, G., Gasparrini, B., CaracciolodiBrienza, V., Di Palo, R., Campanile, G. and Zicarelli, L., First pregnancies established from vitrified blastocysts entirely produced in vitro in mediterranean italian buffalo cows (*bubalus bubalis*), (59) (2003) 374
Neglia, G., *see* Gasparrini, B., (59) (2003) 321

Neglia, G., *see* Wilding, M., (59) (2003) 466
Neild, D.M., Gadella, B.M., Chaves, M.G., Miragaya, M.H., Colenbrander, B. and Agüero, A., Membrane changes during different stages of a freeze–thaw protocol for equine semen cryopreservation, (59) (2003) 1693
Nemenyi, M., *see* Nagy, E., (59) (2003) 494
Neuenschwander, S., *see* Ménétrey, F., (59) (2003) 211
Neveu, N., *see* Baldassarre, H., (59) (2003) 236
Neveu, N., *see* Baldassarre, H., (59) (2003) 831
Ng, S.C., *see* Chen, N.Q., (59) (2003) 472
Nguyen, B.X, *see* Duc, N.H., (59) (2003) 442
Nguyen, B.X., *see* Hanh, N.V., (59) (2003) 488
Nguyen, B.X., *see* Ty, L.V., (59) (2003) 290
Nguyen, V.T., Kure-bayashi, S., Harayama, H., Nagai, T. and Miyake, M., Stage-specific effects of the osmolarity of a culture medium on the development of parthenogenetic diploids in the pig, (59) (2003) 719
Nicacio, A.C., *see* Assumpcao, M.E.O.A., (59) (2003) 297
Nicacio, A.C., *see* Lima, A.S., (59) (2003) 452
Niemann, H., *see* Bjerrregaard, B., (59) (2003) 438
Niemann, H., *see* Faerge, I., (59) (2003) 487
Niemann, H., *see* Herrmann, D., (59) (2003) 419
Niemann, H., *see* Lucas-Hahn, A., (59) (2003) 356
Niemann, H., *see* Wrenzycki, C., (59) (2003) 504
Nieminen, M., *see* Lindeberg, H., (59) (2003) 368
Nikolakopoulos, E., *see* Watson, E.D., (59) (2003) 1181
Nishida, M., *see* Yonemura, I., (59) (2003) 378
Nishisouzu, T., *see* Aoki, S., (59) (2003) 234
Nishisouzu, T., *see* Kitamura, S., (59) (2003) 367
Nishisouzu, T., Sugawara, M., Aoki, S., Dochi, O., Kishi, M. and Koyama, H., Effect of the interval between CIDR and estradiol benzoate administration and initiation of FSH injection on the superovulatory response in japanese black cattle, (59) (2003) 531
Niwa, K., *see* Han, M.-S., (59) (2003) 1851
Noakes, D.E., *see* Sheldon, I. Martin, (59) (2003) 1357
Noguchi, J., *see* Dinnyes, A., (59) (2003) 299
Noguchi, J., *see* Kaneko, H., (59) (2003) 409
Noguchi, J., *see* Kikuchi, K., (59) (2003) 450
Noguchi, J., *see* Nakai, M., (59) (2003) 522
Noguchi, Y., *see* Miki, H., (59) (2003) 521
Nogueira, M.F.G., *see* Barros, C.M., (59) (2003) 524
Northey, D.L., *see* Fischer-Brown, A.E., (59) (2003) 364
Nöthling, J.O., Gerber, D., Gerstenberg, C., Kaiser, C. and Döbeli, M., Abortifacient and endocrine effects of metergoline in beagle bitches during the second half of gestation, (59) (2003) 1929
Nothling, J.O., Irons, P.C., Gerber, D. and Schulmann, M.L., The use of plasma progesterone concentration to predict the optimal breeding time in bitches 6 days in advance, (59) (2003) 225
Nothling, J.O., *see* Gerber, D., (59) (2003) 392
Nothling, J.O., *see* Herold, F.C., (59) (2003) 393
Nottle, M.B., *see* Grupen, C.G., (59) (2003) 447

Oback, B., *see* Wells, D.N., (59) (2003) 45
O'Brien, J.K., *see* Hollinshead, F.K., (59) (2003) 209
O'Brien, J.K., *see* Maxwell, W.M.C., (59) (2003) 511
Obringer, A., *see* Crichton, E.G., (59) (2003) 389
Obstetrics, *see* Rodriguez, C., (59) (2003) 478
O'Carroll, L.A., *see* Hartwich, K.M., (59) (2003) 256
Occhio, M.D., *see* McGowan, M.R., (59) (2003) 1051
Ochiai, T., *see* Kurome, M., (59) (2003) 267
Ochiai, T., *see* Nagashima, H., (59) (2003) 95
Ochiai, Y., *see* Oshima, (59) (2003) 532
Ock, S.A., Kwack, D.O., Lee, H.J., Choe, S.Y. and Rho, G.J., Separation of presumptive round spermatids from bull testis, (59) (2003) 464
O'Coin, M., *see* Behboodi, E., (59) (2003) 237
O'Coin, M., *see* Memili, E., (59) (2003) 274
Ogonuki, N., *see* Miki, H., (59) (2003) 521
Ogonuki, N., *see* Ogura, A., (59) (2003) 87
Ogura, A., Ogonuki, N., Inoue, K. and Mochida, K., New microinsemination techniques for laboratory animals, (59) (2003) 87
Ogura, A., *see* Miki, H., (59) (2003) 521
Ogushi, S., Fulka Jr., J. and Miyano, T., CDC2 kinase and MAP kinase activity in nucleolated and enucleolated porcine oocytes, (59) (2003) 495
Ohlrichs, C.L., *see* Faber, D.C., (59) (2003) 125
Ohta, M., *see* Isaji, M., (59) (2003) 474
Ohtani, M., *see* Hayashi, K., (59) (2003) 1355
Okabe, M., *see* Nagashima, H., (59) (2003) 95
Okada, K., Miyano, T., Miyake, M., Strontium and barium activate in vitro-matured pig oocytes, (59) (2003) 477
Okamoto, Y., *see* Ideta, A., (59) (2003) 359
Okano, A., *see* Geshi, M., (59) (2003) 333
Okimura, T., *see* Yotsushima, K., (59) (2003) 295
Oksman, M., *see* Lindeberg, H., (59) (2003) 368
Oliveira, D.F.F., Oliveira, M.A.L., Lima, P.F., Goncalves, P.B.D., Alves, J.D.R., Cavalcanti Neto, C.C., Tenório Filho, F., Santos Filho, J.P.,

Pina, V.M.R. and Azevedo, J.B., Enhanced viability to obtain bovine blastocyst after retinol addition to an embryonic culture medium, (59) (2003) 375
Oliveira, J.A., *see* Seneda, M.M., (59) (2003) 1435
Oliveira, L.R.S., *see* Andrade, J.C.O., (59) (2003) 358
Oliveira, L.R.S., *see* Taveiros, A.W., (59) (2003) 377
Oliveira, M.A.L., *see* Andrade, J.C.O., (59) (2003) 358
Oliveira, M.A.L., *see* Oliveira, D.F.F., (59) (2003) 375
Oliveira, M.A.L., *see* Taveiros, A.W., (59) (2003) 377
Oliveira, V.P., *see* Assumpcao, M.E.O.A., (59) (2003) 297
Oliveira, V.P., *see* Lima, A.S., (59) (2003) 452
Oliver, J.E., *see* Wells, D.N., (59) (2003) 45
Olivera, J., *see* Isachenko, V., (59) (2003) 1209
Olivera-Angel, M., *see* Serrano, C., (59) (2003) 469
Olmedo, J.A., *see* Rodriguez, C., (59) (2003) 478
Ongeri, E. Moige, *see* Bormann, C.L., (59) (2003) 1373
Onishi, A., *see* Dinnyes, A., (59) (2003) 299
Onishi, A., *see* Fuchimoto, D., (59) (2003) 418
Onishi, A., *see* Iwamoto, M., (59) (2003) 261
Onishi, A., *see* Somfai, T., (59) (2003) 498
Onishi, A., *see* Medvedev, S. Yu., (59) (2003) 327
Ono, Y., *see* Bao, S., (59) (2003) 1231
Onoe, S., *see* Hirayama, H., (59) (2003) 508
Onoe, S., *see* Sawai, K., (59) (2003) 433
Oppenheim, S., *see* Fieni, F., (59) (2003) 1515
Ordog, V., *see* Nagy, E., (59) (2003) 494
Ortiz, R., *see* Jiménez, I., (59) (2003) 1171
Oshima, K., *see* Kurome, M., (59) (2003) 267
Oshima, Ochiai, Y., Kojima, T. and Komatsu, M., Effect of estradiol benzoate and GnRH on superovulatory response and subsequent reproductive performance in postpartum suckling japanese black cattle, (59) (2003) 532
Oshimo, Y., *see* Geshi, M., (59) (2003) 333
Ota, A., *see* Senbon, S., (59) (2003) 414
Oter, M., *see* Palasz, A.T., (59) (2003) 402
Otter, T., *see* Merton, J.S., (59) (2003) 346
Ottosen, L.D.M., *see* Lopes, A.S., (59) (2003) 345
Overstrom, E.W., *see* Vajta, G., (59) (2003) 291
Overstrom, E.W., *see* Wang, M.K., (59) (2003) 292
Overton, S.A., *see* Memili, E., (59) (2003) 274
Oyamada, T., Iwayama, H. and Fukui, Y., Bovine blastocyst production by an individual oocyte culture during IVM/IVF/IVC using a chemically defined medium, (59) (2003) 348
P. Renard, J., *see* Zhou, Q., (59) (2003) 296
Pabuccuoglu, Serhat, *see* Banu Ozdas, Ozen, (59) (2003) 457
Paino, G., *see* Mirabella, N., (59) (2003) 1999
Palasz, A.T., Perez-Garnelo, S.S., Oter, M., Borque, C., Talavera, C., Delclaux, M., Lopez, M. and De la Fuente, J., Cryopreservation of European Bison (*Bison bonasus*) semen, (59) (2003) 402
Pallante, B., Ainslie, A., McGarry, M., Ferrier, P., Gao, S. and Wilmut, I., Chromatin structure in cloned mouse embryos, (59) (2003) 277
Pallante, B., *see* Gao, S., (59) (2003) 253
Palma, G.A., *see* Ferré, L.B., (59) (2003) 301
Panarace, M., Medina, M., Cattaneo, L., Caballero, J., Cerrate, H., Dalla Lasta, M. and Kaiser, G., Embryo production using sexed semen in superovulated cows and heifers, (59) (2003) 513
Pant, H.C., *see* Misra, A.K., (59) (2003) 1203
Papadopoulos, S., Hanrahan, J.P., Donovan, A., Duffy, P., Wade, M., Boland, M.P. and Lonergan, P., Use of in vitro fertilization as a predictor of semen quality prior to cervical insemination in sheep, (59) (2003) 458
Papasso-Brambilla, E., *see* Bagg, M.A., (59) (2003) 436
Paris, D.B.B.P., Taggart, D.A., Shimmin, G.A., Renfree, M.B. and Paris, M.C.J., Anatomical considerations for the development of artificial insemination by catheter in two marsupials, (59) (2003) 401
Paris, M.C.J., *see* Druery, G.V., (59) (2003) 391
Paris, M.C.J., *see* Paris, D.B.B.P., (59) (2003) 401
Paris, M.C.J., *see* West, M., (59) (2003) 405
Park, C.-K., *see* Choi, J.-Y., (59) (2003) 244
Park, C.K., *see* Hwang, I.S., (59) (2003) 461
Park, E.S., Jang, G., Han, J.Y. and Lim, J.M., Different patterns in the incidence of apoptosis in bovine embryos derived from IVF and somatic cell nuclear transfer, (59) (2003) 248
Park, E.S., *see* Cho, J.K., (59) (2003) 242
Park, E.S., *see* Hwang, W.S., (59) (2003) 342
Park, E.S., *see* Jang, G., (59) (2003) 252
Park, H.J., *see* Cho, J.K., (59) (2003) 242
Park, H.S., Lee, M.Y., Park, J.K., Jin, J.I., Lee, J.S., Sohn, S.H. and Jung, J.Y., Interspecies nuclear transfer using caprine somatic cells and bovine or porcine cytoplasts, (59) (2003) 278
Park, J.J., *see* Cho, S.K., (59) (2003) 518
Park, J.J., *see* Yin, X.J., (59) (2003) 294
Park, J.K., *see* Park, H.S., (59) (2003) 278
Park, J.S., *see* Lee, K.K., (59) (2003) 491
Park, M.R., *see* Cho, S.K., (59) (2003) 518
Park, M.R., *see* Yin, X.J., (59) (2003) 294

Park, S.-B., *see* Yang, B.-C., (59) (2003) 317
Park, S.J., Hur, T.Y., Suh, G.H., Ryu, I.S., Ahn, B.S. and Son, D.S., Pregnancy rates after estrous induced by $PGF_{2\alpha}$, CIDR+, and LH treatments for long days opened Holstein cows, (59) (2003) 227
Parks, J.E., Lee, D.R., Huang, S. and Kaproth, M.T., Prospects for spermatogenesis in vitro, (59) (2003) 73
Parnpai, R. and Tasripoo, K., Effects of different activation protocols on the development of cloned swamp buffalo embryos derived from granulosa cells, (59) (2003) 279
Parrilla, I., *see* Vazquez, J.M., (59) (2003) 1605
Pashen, R., *see* Tatham, B.G., (59) (2003) 404
Pashen, R., *see* Tatham, B.G., (59) (2003) 709
Pavasuthipaisit, K., *see* Kitiyanant, Y., (59) (2003) 475
Pavasuthipaisit, K., *see* Kitiyanant, Y., (59) (2003) 1775
Pavasuthipaisit, K., *see* Saikhun, J., (59) (2003) 284
Pavlok, A., *see* Herrmann, D., (59) (2003) 419
Payton, R.R., Lawrence, J.L., Saxton, A.M., Dunlap, J.R. and Edwards, J.L., Cortical granule types and nuclear stage of bovine oocytes after exposure to elevated temperature during maturation, (59) (2003) 496
Payton, R.R., *see* Edwards, J.L., (59) (2003) 250
Paz, P., Contreras, I., Sanchez, A.J., Chamorro, C.A., Anel, E., Herraez, P., Martinez-Pastor, F. and Anel, L., Production of monoclonal antibodies against ram spermatozoa as citochemistry probes to evaluate seminal quality, (59) (2003) 228
Paz, P., *see* Anel, L., (59) (2003) 386
Paz, P., *see* Diaz, A., (59) (2003) 217
Paz, P., *see* Garcia-Macias, (59) (2003) 220
Paz, P., *see* Rodriguez, C., (59) (2003) 478
Peachey, B., *see* Saywell, D., (59) (2003) 312
Pedersen, H.G., Rasmussen, Z., Viuff, D., Thomsen, P.D., Rickords, L., Lai, L., Prather, R.S. and Greve, T., Chromosome abnormalities in in vivo developed, in vitro produced or parthenogenetically activated porcine embryos, (59) (2003) 430
Pedersen, H.G., *see* Bogh, I.B., (59) (2003) 238
Peelman, L.J., *see* Yuan, Y.Q., (59) (2003) 1585
Peña, A.I., Lugilde, L.L., Barrio, M., Herradón, P.G. and Quintela, L.A., Effects of Equex from different sources on post-thaw survival, longevity and intracellular Ca^{2+} concentration of dog spermatozoa, (59) (2003) 1725
Perecin, F., *see* Meo, S.C., (59) (2003) 476
Perènyi, Z., *see* de Sousa, N.M., (59) (2003) 1131
Perez-Garnelo, S., *see* Rizos, D., (59) (2003) 350
Perez-Garnelo, S.S., *see* Palasz, A.T., (59) (2003) 402
Peta, F., *see* Irons, P.C., (59) (2003) 222
Peter, A.T. and Linde-Forsberg, C., Efficacy of the anticaspase agent zVAD-fmk on post-thaw viability of canine spermatozoa, (59) (2003) 1525
Peterson, A.J. and Lee, R.S-F., Improving successful pregnancies after embryo transfer, (59) (2003) 687
Petyim, S., *see* Båge, R.B, (59) (2003) 484
Peura, T.T., Rudiger, S.R., Vajta, G. and Walker, S.K., Increased in vitro development rates of sheep somatic cell nuclear transfer embryos produced by 'reverse-order' zona-free method, (59) (2003) 280
Peura, T.T., *see* Chang, W.C., (59) (2003) 241
Peura, T.T., *see* Hamilton, H.M., (59) (2003) 255
Peura, T.T., *see* Maddox-Hyttel, P., (59) (2003) 273
Peura, T.T., *see* Vajta, G., (59) (2003) 291
Pfützner, A., *see* Drillich, M., (59) (2003) 951
Philipona, C., *see* Reist, M., (59) (2003) 1707
Phillips, T.C., Larsen, R.E., Hernandez, J., Strachan, L., Samuelson, D., Shille, V.M. and Archbald, L.F., Selective control of the estrous cycle of the dog through suppression of estrus and reduction of the length of anestrus, (59) (2003) 1441
Phipps-Todd, B., *see* Bielanski, A., (59) (2003) 381
Phutikanit, N., *see* Techakumphu, M., (59) (2003) 540
Picarella Stein, M., *see* Destrempes, M.M., (59) (2003) 245
Picarella, M., *see* Butler, R.E., (59) (2003) 240
Picarella, M., *see* Gavin, W., (59) (2003) 254
Picazo, R.A., Garcia Ruiz, J.P., Santiago Moreno, J., Gonzalez de Bulnes, A., Muñoz, J., Silvan, G., Lorenzo, P.L. and Clllera, J., Prolactin receptors in sheep ovary: regulated expression of the long but not the short prolactin receptor isoform throughout the estrous cycle, (59) (2003) 412
Picton, H., *see* Eckert, J.J., (59) (2003) 319
Piedrahita, J.A., *see* Dindot, S.V., (59) (2003) 417
Pieńkowski, M., *see* Kątska-Książkiewicz, L., (59) (2003) 1567
Pierson, J., *see* Baldassarre, H., (59) (2003) 236
Piltti, K., Aalto, J., Jarvinen, M., Korhonen, H., Kuronen, V., Lindeberg, H., Amstislavsky, S., Ternovskaya, Y., Valtonen, M. and Halmekyto, M., Nuclear maturation of european polecat (*Mustela putorius*) in vivo oocytes and success in using mustelid hybrids as recipients for embryo transfer, (59) (2003) 403
Pina, V.M.R., *see* Oliveira, D.F.F., (59) (2003) 375
Pina, V.M.R., *see* Taveiros, A.W., (59) (2003) 377

Pintado, B., *see* Fernandez-Gonzalez, R., (59) (2003) 320
Pintado, B., *see* Jimenez, A., (59) (2003) 509
Pintado, B., *see* Lonergan, P., (59) (2003) 493
Pintus, P.P., *see* Ledda, S., (59) (2003) 326
Pintus, P.P., *see* Leoni, G., (59) (2003) 492
Pirassununga-SP, *see* Adona, P.R., (59) (2003) 479
Pitala, W., *see* de Sousa, N.M., (59) (2003) 1131
Plouzeau, E., *see* Saint Jalme, M., (59) (2003) 875
Ponchon, S., *see* Freret, S., (59) (2003) 445
Ponderato, N., *see* Galli, C., (59) (2003) 599
Ponderato, N., *see* Lagutina, I., (59) (2003) 269
Ponsart, C., *see* Freret, S., (59) (2003) 445
Ponsuksili, S., *see* Mamo, S., (59) (2003) 427
Ponsuksili, S., *see* Nabiev, D., (59) (2003) 226
Ponsuksili, S., *see* Tesfaye, D., (59) (2003) 434
Ponter, A., *see* Freret, S., (59) (2003) 445
Pope, C., *see* Damiani, P., (59) (2003) 390
Pope, C.E., Gomez, M.C., King, A.L., Harris, R.F. and Dresser, B.L., Embryos produced in vitro after recovery of oocytes from cat ovaries stored at 4°C for 24 to 28 hours retain the competence to develop into live kittens after transfer to recipients, (59) (2003) 308
Pope, C.E., *see* Harris, R.F., (59) (2003) 448
Pope, E., *see* Wirtu, G., (59) (2003) 354
Porto, L.P.C., *see* Barros, C.M., (59) (2003) 524
Pöschl, M., *see* Řezáč, P., (59) (2003) 1325
Poulin, N., *see* Cognié, Y., (59) (2003) 171
Poulin, N., *see* King, W.A., (59) (2003) 451
Powell, A.M., Talbot, N.C., Wells, K.D., Kerr, D.E., Pursel, V.G. and Wall, R.J., Source of fetus determines efficiency of production of nuclear transfer jersey cattle genetically engineered to resist mastitis, (59) (2003) 281
Prather, R.S., Hawley, R.J., Carter, D.B., Lai, L. and Greenstein, J.L., Transgenic swine for biomedicine and agriculture, (59) (2003) 115
Prather, R.S., *see* Caamano, J.N., (59) (2003) 361
Prather, R.S., *see* Isom, S.C., (59) (2003) 323
Prather, R.S., *see* Mao, J., (59) (2003) 410
Prather, R.S., *see* Pedersen, H.G., (59) (2003) 430
Preis, K.A., *see* Carnevale, E.M., (59) (2003) 362
Prelle, K., *see* Hiendleder, S., (59) (2003) 257
Presicce, G.A., *see* Su, L., (59) (2003) 499
Pribenszky, C., Cseh, S. and Solti, L., Rapid freezing of hatched zona-free mouse blastocysts, (59) (2003) 309
Pribenszky, C., Molnar, M., Solti, L. and Cseh, S., Viability of embryos after exposing to high hydrostatic pressure, (59) (2003) 329
Prieto, L., *see* Hidalgo, C.O., (59) (2003) 366
Probst, S. and Rath, D., Production of piglets using intracytoplasmic sperm injection (ICSI) with flowcytometrically sorted boar semen and artificially activated oocytes, (59) (2003) 961
Promdireg, A., *see* Techakumphu, M., (59) (2003) 540
Pryor, W., *see* Crichton, E.G., (59) (2003) 389
Pugh, A. and Tervit, H.R., Chilling sensitivity of bovine oocytes following maturation in the presence of fatty acids or putrescine, (59) (2003) 311
Pugh, A., Schurmann, A. and Tervit, H.R., Oleic acid ameliorates the serum-induced reduction in re-expansion of bovine embryos following cytochalasin-induced collapse, (59) (2003) 310
Pugh, A., *see* Saywell, D., (59) (2003) 312
Pursel, V.G., *see* Powell, A.M., (59) (2003) 281

Quest, M., *see* Goeritz, F., (59) (2003) 1487
Quintela, L.A., *see* Peña, A.I., (59) (2003) 1725
Quintero-Moreno, A., Miró, J., Teresa Rigau, A. and Rodríguez-Gil, J.E., Identification of sperm subpopulations with specific motility characteristics in stallion ejaculates, (59) (2003) 1973

Raby, G., *see* Tsuboi, T., (59) (2003) 385
Rajamahendran, R., *see* Mtango, N.R., (59) (2003) 1393
Ramón, J.P., *see* Alabart, J.L., (59) (2003) 1345
Ramos, A.A., *see* Camargo, L.S.A., (59) (2003) 338
Ramos, A.A., *see* Viana, J.H.M., (59) (2003) 415
Rao, K.M., Cote, F., Baldassarre, H. and Wang, B., The effects of exogenous DNA concentration and sperm treatments on the DNA association with spermatozoa in goat, (59) (2003) 538
Rapiejko, K.T., *see* Destrempes, M.M., (59) (2003) 245
Rasmussen, C., *see* Maddox-Hyttel, P., (59) (2003) 273
Rasmussen, T.A., *see* Kubisch, H.M., (59) (2003) 425
Rasmussen, Z., *see* Pedersen, H.G., (59) (2003) 430
Rath, D., *see* Bjerrregaard, B., (59) (2003) 438
Rath, D., *see* Faerge, I., (59) (2003) 487
Rath, D., *see* Maxwell, W.M.C., (59) (2003) 511
Rath, D., *see* Probst, S., (59) (2003) 961
Rath, D., *see* Romar, R., (59) (2003) 975
Ratky, J., *see* Bali Papp, A., (59) (2003) 437
Ratto, M.H., Singh, J. and Adams, G.P., Follicular wave synchronization and fixed-time mating in llamas, (59) (2003) 413
Rawlinson, C.A., *see* Hewitt, E.A., (59) (2003) 420
Rawson, D.d.M., *see* Zhang, T., (59) (2003) 1545
Reczigel, J., *see* Karen, A., (59) (2003) 1941

Redmer, D.A., *see* Grazul-Bilska, A.T., (59) (2003) 1449
Reed, L.C., Lane, M. and Gardner, D.K., In vivo rates of mouse embryo development can be attained in vitro, (59) (2003) 349
Reed, M.A., *see* Modlinski, J.A., (59) (2003) 357
Reguszynski, K., *see* Zeuner, A., (59) (2003) 1421
Reichenbach, H.-D., *see* Hiendleder, S., (59) (2003) 257
Reik, W., Santos, F. and Dean, W., Mammalian epigenomics: reprogramming the genome for development and therapy, (59) (2003) 21
Reis, E.L., *see* Baruselli, P.S., (59) (2003) 214
Reis, E.L., *see* Nasser, L.F., (59) (2003) 530
Reist, M., Erdin, D.K., von Euw, D., Tschümperlin, K.M., Leuenberger, H., Hammon, H.M., Morel, C., Philipona, C., Zbinden, Y., Künzi, N. and Blum, J.W., Postpartum reproductive function: association with energy, metabolic and endocrine status in high yielding dairy cows, (59) (2003) 1707
Renard, J.P., *see* Apimeteetumrong, M., (59) (2003) 235
Renard, J.P., *see* Servely, J.L., (59) (2003) 288
Renfree, M.B., *see* Paris, D.B.B.P., (59) (2003) 401
Reynolds, L.P., *see* Grazul-Bilska, A.T., (59) (2003) 1449
Řezáč, P., Pöschl, M. and Křivánek, I., Effect of probe location on changes in vaginal electrical impedance during the porcine estrous cycle, (59) (2003) 1325
Rezaei, N., Abdul Jalil, A.K., Chung, J.T. and Chian, R.C., Role of essential and non-essential amino acids contained in maturation medium on bovine oocyte maturation and subsequent fertilization and early embryonic development in vitro, (59) (2003) 497
Rho, G.J., Alexander, B., Semple, E., Betts, D.H. and King, W.A., Evaluation of bovine blastocysts cloned using different activation protocols, (59) (2003) 282
Rho, G.J., *see* Alexander, B., (59) (2003) 233
Rho, G.J., *see* Cho, S.R., (59) (2003) 243
Rho, G.J., *see* Ock, S.A., (59) (2003) 464
Rickords, L., *see* Pedersen, H.G., (59) (2003) 430
Riddell, K.P., *see* Givens, M.D., (59) (2003) 382
Riddell, M.G., *see* Givens, M.D., (59) (2003) 382
Rieke, A.R., *see* Caamano, J.N., (59) (2003) 361
Riesen, J., *see* Du, F., (59) (2003) 247
Rigby, S.L., *see* Brinsko, S.P., (59) (2003) 735
Rigby, S.L., *see* Brinsko, S.P., (59) (2003) 1001
Rings, F., *see* Mosslacher, G., (59) (2003) 372
Rizos, D., Gutierrez-Adan, A., Perez-Garnelo, S., de la Fuente, J., Boland, M.P. and Lonergan, P., Effect of serum during bovine embryo culture on blastocyst development, cryotolerance, and messenger RNA expression, (59) (2003) 350
Rizos, D., *see* Lonergan, P., (59) (2003) 493
Rizos, D., *see* Ward, F., (59) (2003) 1575
RJ, *see* Meo, S.C., (59) (2003) 476
Robl, J.M., Kasinathan, P., Sullivan, E., Kuroiwa, Y., Tomizuka, K. and Ishida, I., Artificial chromosome vectors and expression of complex proteins in transgenic animals, (59) (2003) 107
Roca, J., *see* Cremades, T., (59) (2003) 298
Roca, J., *see* Vazquez, J.M., (59) (2003) 1605
Rocha, A.A., *see* Adona, P.R., (59) (2003) 479
Rocha, A.A., *see* Adona, P.R., (59) (2003) 480
Roche, A., *see* Isachenko, V., (59) (2003) 1209
Rodríguez-Gil, J.E., *see* Quintero-Moreno, A., (59) (2003) 1973
Rodríguez-Martínez, H., *see* Båge, R.B, (59) (2003) 484
Rodríguez-Martínez, H., *see* Gil, J., (59) (2003) 1157
Rodríguez-Martínez, H., *see* Gil, J., (59) (2003) 1241
Rodriguez de Fonseca, F., *see* Fernandez-Gonzalez, R., (59) (2003) 320
Rodriguez, C., Anel, L., Alvarez, M., Anel, E., Olmedo, J.A., Boixo, J.C., Chamorro, C. and Paz P., Dvine oocytes metabolism depending on follicle size, (59) (2003) 478
Rodriguez, C., *see* Diaz, A., (59) (2003) 217
Rodriguez-Irazoqui, M., *see* Gil, J., (59) (2003) 1157
Rodriguez-Martinez, H., *see* Bergqvist, A.-S., (59) (2003) 467
Rodriguez-Sallaberry, C.J., *see* Kowalski, A.A., (59) (2003) 424
Roh, S., Guo, J., Malakooti, N., Morrison, J.R., Trounson, A.O. and Du, Z.T., Birth of rats by nuclear transplantation using 2-cell stage embryo as donor nucleus and recipient cytoplasm, (59) (2003) 283
Rohrbach, N.R., *see* Scenna, F.N., (59) (2003) 335
Rojas, A., *see* Lucena, E., (59) (2003) 272
Roman, H., *see* Hill, J., (59) (2003) 258
Romano, J., *see* Dindot, S.V., (59) (2003) 417
Romar, R., Coy, P., Ruiz, S., Gadea, J. and Rath, D., Effects of oviductal and cumulus cells on in vitro fertilization and embryo development of porcine oocytes fertilized with epididymal spermatozoa, (59) (2003) 875
Romar, R., *see* Garcia, E., (59) (2003) 519
Rosa-e-Silva, A.A.M., *see* Vireque, A.A., (59) (2003) 503
Rosati, I., *see* Ledda, S., (59) (2003) 326

Rosati, I., *see* Leoni, G., (59) (2003) 492
Roseman, H.M., *see* Walters, E.M., (59) (2003) 353
Rosenkrans, K.S. and Hardin, D.K., Repeatability and accuracy of reproductive tract scoring to determine pubertal status in beef heifers, (59) (2003) 1087
Rosenkranz, C., *see* Bjerrregaard, B., (59) (2003) 438
Rosenkranz, C., *see* Faerge, I., (59) (2003) 487
Rowe, J., *see* Fieni, F., (59) (2003) 1515
Royo, L.J., Diez, C., Goyache, F., Duque, P., Alvarez, I., Hidalgo, C.O. and Gomez, E., Bovine cumulus-granulosa cells express increased midkine but not IGF-I in response to 9-*cis*-retinoic acid during in vitro maturation, (59) (2003) 431
Rozeboom, K.J., Lindsey, B.R. and Wilson, M.E., Effect of semen extender on oocyte penetration capacity by porcine spermatozoa in vitro, (59) (2003) 229
Rucker III, E.B., *see* Isom, S.C., (59) (2003) 323
Ruddock, N.T., Wilson, K. and French, A., Expression of 8 imprinted genes in cDNA pools produced from single bovine oocytes and blastocysts, (59) (2003) 432
Rudiger, S.R., *see* Chang, W.C., (59) (2003) 241
Rudiger, S.R., *see* Hamilton, H.M., (59) (2003) 255
Rudiger, S.R., *see* Kakar, M.A., (59) (2003) 527
Rudiger, S.R., *see* Peura, T.T., (59) (2003) 280
Ruiz, S., *see* Garcia, E., (59) (2003) 519
Ruiz, S., *see* Romar, R., (59) (2003) 957
Rumpf, R., *see* Dode, M.A.N., (59) (2003) 340
Rutledge, J.J., *see* Fischer-Brown, A.E., (59) (2003) 364
Rycroft, A.N., *see* Sheldon, I. Martin, (59) (2003) 1357
Ryffel, B., *see* Zhou, Q., (59) (2003) 296
Ryńska, B., *see* Kątska-Książkiewicz, L., (59) (2003) 1567
Ryu, I.S., *see* Park, S.J., (59) (2003) 227

Sa, W.F., *see* Camargo, L.S.A., (59) (2003) 338
Sa, W.F., *see* Viana, J.H.M., (59) (2003) 415
Sa, W.F., *see* Vireque, A.A., (59) (2003) 503
Sabeur, K., *see* Ball, B.A., (59) (2003) 901
Sabin, H.-J., *see* Drillich, M., (59) (2003) 951
Sabin, M., *see* Drillich, M., (59) (2003) 951
Saeed, A.M., *see* Silvestre, M.A., (59) (2003) 1469
Saeki, K., *see* Hosoi, Y., (59) (2003) 408
Saeki, K., *see* Matsumoto, K., (59) (2003) 428
Saeki, K., Sumitomo, N., Nagata, Y., Hosoi, Y., Matsumoto, K. and Iritani, A., Atomic force microscopy of bovine acrosome-intact and reacted spermatozoa; their fine structure and numerical analysis, (59) (2003) 468
Saikhun, J., Kitiyanant, Y., Sritanaudomchai, H. and Pavasuthipaisit, K., Reprogramming of telomerase activity in nuclear transfer buffalo embryos using quiescent or non-quiescent somatic cells as donor nuclei, (59) (2003) 284
Saikhun, J., *see* Kitiyanant, Y., (59) (2003) 475
Saikhun, J., *see* Kitiyanant, Y., (59) (2003) 1775
Saint Jalme, M., Lecoq, R., Seigneurin, F., Blesbois, E. and Plouzeau, E., Cryopreservation of semen from endangered pheasants: the first step towards a cryobank for endangered avian species, (59) (2003) 875
Saito, N., *see* Kobayashi, S., (59) (2003) 376
Saito, S., *see* Nagashima, H., (59) (2003) 95
Sakaguchi, M., Sasamoto, Y., Suzuki, T., Takahashi, Y. and Yamada, Y., Relationship between postpartum follicular dynamics and fertility in dairy cattle, (59) (2003) 230
Sakaguchi, M., *see* Yotsushima, K., (59) (2003) 295
Sakai, S., *see* Ideta, A., (59) (2003) 359
Sakatani, M., *see* Fuchimoto, D., (59) (2003) 418
Sakatani, M., *see* Hosoe, M., (59) (2003) 421
Sakiko, M., *see* Yang, B.-C., (59) (2003) 317
Sakuragawa, N., *see* Mitani, T., (59) (2003) 537
Sakuragawa, N., *see* Narita, J., (59) (2003) 276
Salamone, D.F., Santos, C.B., Barañao, J.L., Bussmann, L., Artuso, J., Valdez, A., Munar, C., Werning, C. and Melo, C., Effect of different culture systems, donor cell origin and roscovitin treatment of recipient oocytes in bovine cloning, (59) (2003) 285
Samiec, M., Skrzyszowska, M. and Smorag, Z., Somatic cloning in pigs; effect of activation treatments, (59) (2003) 286
Samuelson, D., *see* Phillips, T.C., (59) (2003) 1441
Sanchez, A.J., *see* Paz, P., (59) (2003) 228
Sangild, P.T., *see* Schmidt, M., (59) (2003) 331
Sano, M., *see* Yotsushima, K., (59) (2003) 295
Sanon, M., *see* de Sousa, N.M., (59) (2003) 1131
Sansinena, M., Taylor, P., Taylor, S., Denniston, R.S. and Godke, R.A., Production of interspecies nuclear transfer embryos using male and female llama (*lama glama*) cell lines, (59) (2003) 287
Santiago Moreno, J., *see* Picazo, R.A., (59) (2003) 412
Santos Filho, J.P., *see* Oliveira, D.F.F., (59) (2003) 375
Santos Filho, J.P., *see* Taveiros, A.W., (59) (2003) 377
Santos, C.B., *see* Salamone, D.F., (59) (2003) 285
Santos, F., *see* Reik, W., (59) (2003) 21

Saratsis, P., *see* Gouletsou, P.G., (59) (2003) 1959
Sarmento, O., Bolling, L., Wright, P., Wang, Y., Allis, D., Herr, J. and Coonrod, S., Resetting the "histone code" in the mammalian ovum: a 'proof-of-principle' study, (59) (2003) 330
Sartori, R., Suarez-Fernandez, C.A., Sullivan, B., Geiger, L.N., Guenther, J.N. and Wiltbank, M.C., Fertilization rate and embryo quality in superovulated holstein heifers and lactating cows artificially inseminated in the body of the uterus or in the tip of the uterine horns, (59) (2003) 533
Sasada, H., *see* Kawahara, M., (59) (2003) 262
Sasada, H., *see* Kobayashi, J., (59) (2003) 462
Sasaki, A., *see* Kobayashi, J., (59) (2003) 462
Sasamoto, Y., *see* Sakaguchi, M., (59) (2003) 230
Sato, E., *see* Kawahara, M., (59) (2003) 262
Sato, E., *see* Somfai, T., (59) (2003) 498
Sato, *see* Kobayashi, J., (59) (2003) 462
Sato, W., *see* Miyashita, N., (59) (2003) 1557
Sawadogo, L., *see* de Sousa, N.M., (59) (2003) 1131
Sawai, K., Kageyama, S., Moriyasu, S., Hirayama, H., Minamihashi, A. and Onoe, S., Quantification of messenger RNA in bovine nuclear transfer embryos reconstructed with fetal fibroblast cells and embryo blastomers, (59) (2003) 433
Saxton, A.M., *see* Edwards, J.L., (59) (2003) 250
Saxton, A.M., *see* Payton, R.R., (59) (2003) 496
Saxton, A.M., *see* Scenna, F.N., (59) (2003) 335
Sayoud, H., *see* Gasparrini, B., (59) (2003) 321
Saywell, D., Peachey, B., Troskie, H. and Pugh, A., Effect of culture of bovine IVP embryos with vero cells or LIF protein on post-thaw survival following cryopreservation, (59) (2003) 312
Scenna, F.N., Edwards, J.L., Rohrbach, N.R., Saxton, A.M. and Schrick, F.N., Detrimental effects of prostaglandin $F_{2\alpha}$ on preimplantation development of bovine embryos, (59) (2003) 335
Schaefer, D.M., *see* Fischer-Brown, A.E., (59) (2003) 364
Schams, D., *see* Handler, J., (59) (2003) 1381
Schams, D., *see* Langendijk, P., (59) (2003) 849
Schelander, K., *see* Laurincik, J., (59) (2003) 426
Schellander, K., *see* Bjerrregaard, B., (59) (2003) 438
Schellander, K., *see* Faerge, I., (59) (2003) 487
Schellander, K., *see* Giller, H., (59) (2003) 473
Schellander, K., *see* Mamo, S., (59) (2003) 427
Schellander, K., *see* Mosslacher, G., (59) (2003) 372
Schellander, K., *see* Nabiev, D., (59) (2003) 226
Schellander, K., *see* Tesfaye, D., (59) (2003) 434
Schenk, J.L. and DeGrofft, D.L., Insemination of cow elk with sexed frozen semen, (59) (2003) 514
Schenk, J.L., *see* Fry, R.C., (59) (2003) 446
Schenk, J.L., *see* Seidel Jr., G.E., (59) (2003) 515
Schenk, J.L., *see* Suh, T.K., (59) (2003) 516
Schlafer, D., *see* Hill, J., (59) (2003) 258
Schmidt, M., Sangild, P.T. and Greve, T., Improving the viability of weak premature calves with ACTH, (59) (2003) 331
Schmidt, M., *see* Bogh, I.B., (59) (2003) 238
Schneider, H., *see* Mosslacher, G., (59) (2003) 372
Schneider, H., *see* Nabiev, D., (59) (2003) 226
Schoevers, E., *see* Kidson, A., (59) (2003) 1889
Schoevers, E.J., Kidson, A., Verheijden, J.H.M. and Bevers, M.M., Effect of follicle-stimulating hormone on nuclear and cytoplasmic maturation of sow oocytes in vitro, (59) (2003) 2017
Schreier, L., *see* Kidson, A., (59) (2003) 210
Schrick, F.N., *see* Edwards, J.L., (59) (2003) 250
Schrick, F.N., *see* Scenna, F.N., (59) (2003) 335
Schulmann, M.L., *see* Nothling, J.O., (59) (2003) 225
Schultz, R.M., *see* Hosoe, M., (59) (2003) 421
Schurmann, A., *see* Pugh, A., (59) (2003) 310
Seattle, *see* Curnow, E.C., (59) (2003) 363
Sego, L.H., *see* Bergfelt, D.R., (59) (2003) 1811
Seidel Jr., G.E., *see* Checura, C.M., (59) (2003) 207
Seidel Jr., G., *see* Tubman, L.M., (59) (2003) 517
Seidel Jr., G.E., Brink, Z. and Schenk, J.L., Use of heterospermic insemination with fetal sex as the genetic marker to study fertility of sexed sperm, (59) (2003) 515
Seidel, G.E., *see* Flint, A., (59) (2003) 507
Seidel Jr., G.E., Economics of selecting for sex: the most important genetic trait, (59) (2003) 585
Seidel Jr., G.E., *see* Li, G.-P., (59) (2003) 1143
Seigneurin, F., *see* Saint Jalme, M., (59) (2003) 875
Sekine, J., *see* Hishinuma, M., (59) (2003) 813
Selvaraju, S., Agarwal, S.K., Karche, S.D. and Majumdar, A.C., Ovarian response, embryo production and hormonal profile in superovulated goats treated with insulin, (59) (2003) 1459
Semple, E., *see* Rho, G.J., (59) (2003) 282
Senbon, S., Ota, A., Tachibana, M. and Miyano, T., Bovine oocytes in secondary follicles grow and acquire the meiotic competence in SCID mice, (59) (2003) 414
Seneda, M.M., Esper, C.R., Garcia, J.M., Andrade, E.R., Binelli, M., Oliveira, J.A. and Nascimento, A.B., Efficacy of linear and convex transducers

for ultrasound-guided transvaginal follicle aspiration, (59) (2003) 1435
Seon, B., *see* Du, F., (59) (2003) 247
Seong, H.H., Chang, Y.M., Min, K.S., Choi, S.H., Yang, B.C., Im, S.K., Chang, W.K. and Kim, C.K., Characterization of progesterone and TFG-β_1 levels of nuclear transfer recipient in Korean Native cattle, (59) (2003) 336
Seong, H.-H., *see* Yang, B.-C., (59) (2003) 317
Serrano, C., Velez, C., Jimenez del Rio, M. and Olivera-Angel, M., Kinetics of H_2O_2 and mitochondrial activity during early embryo development in in vitro produced bovine embryos, (59) (2003) 469
Servely, J.L., Le Bourhis, D., Freret, S., Laloy, E., Heyman, Y., Renard, J.P. and Vignon, X., Comparison of developmental potential of keratinocytes and fibroblasts after nuclear transfer in bovine, (59) (2003) 288
Shahab, M., *see* Ahmad, Z., (59) (2003) 1189
Shaw, J., *see* Brockway, A., (59) (2003) 460
Shaw, J., *see* Cleary, M., (59) (2003) 388
Shaw, J., *see* West, M., (59) (2003) 405
Sheehan, C., Lane, M. and Gardner, D.K., Revitrification of mouse embryos does not affect developmental competence or viability, (59) (2003) 313
Sheerin, P., *see* Bartolome, J., (59) (2003) 1991
Sheldon, I. Martin, Noakes, D.E., Rycroft, A.N. and Dobson, H., The effect of intrauterine administration of estradiol on postpartum uterine involution in cattle, (59) (2003) 1357
Shen, M.F., *see* Destrempes, M.M., (59) (2003) 245
Shen, P.C., Lee, S.N., Wu, J.S., Huang, J.C., Chu, F.H., Chang, C.C., Kung, J.C., Lin, H.H., Chen, L.R. and Cheng, W.T.K., The effect of electrical field strength for activation on development of caprine nuclear transfer embryos cloned from adult ear cells, (59) (2003) 289
Shiga, K., *see* Miyashita, N., (59) (2003) 1557
Shille, V.M., *see* Phillips, T.C., (59) (2003) 1441
Shim, Y.H., *see* Lee, Y.W., (59) (2003) 396
Shimatsu, Y., *see* Hoshino, Y., (59) (2003) 260
Shimizu, M., *see* Yotsushima, K., (59) (2003) 295
Shimmin, G.A., *see* Druery, G.V., (59) (2003) 391
Shimmin, G.A., *see* Paris, D.B.B.P., (59) (2003) 401
Shin, H.J., *see* Lee, Y.W., (59) (2003) 396
Shin, S.T., *see* Lee, Y.W., (59) (2003) 396
Shino, M., *see* Kashiwazaki, N., (59) (2003) 423
Shino, M., *see* Nakai, M., (59) (2003) 522
Shiue, Y.L., Lee, J.D., Lee, S.M. and Chen, L.R., Effects of the culture period and passage number on the capacity of chimera participation of inner cell mass deriving cells from porcine embryos, (59) (2003) 380
Si, W., *see* Su, L., (59) (2003) 499
Si, W., Zheng, P., Li, Y., Wang, H. and Ji, W., Effect of glycerol and dimethylsulphoxide on cryopreservation of rhesus monkey (*macaca mulatta*) spermatozoa, (59) (2003) 314
Silva, A.R., Cardoso, R.C.S., Uchoa, D.C. and Silva, L.D.M., Quality of canine semen submitted to single or fractionated glycerol addition during the freezing process, (59) (2003) 821
Silva, A.R., *see* Cardoso, R.d.C.S., (59) (2003) 743
Silva, L.D.M., *see* Silva, A.R., (59) (2003) 821
Silva, R.C.P., *see* Marques, M.O., (59) (2003) 369
Silvan, G., *see* Picazo, R.A., (59) (2003) 412
Silvestre, M.A., Saeed, A.M., Cervera, R.P., Escribá, M.J. and García-Ximénez, F., Rabbit and pig ear skin sample cryobanking: effects of storage time and temperature of the whole ear extirpated immediately after death, (59) (2003) 1469
Singh, J., Dominguez, M., Jaiswal, R. and Adams, G.P., A simple ultrasound-test to predict superstimulatory response in cattle, (59) (2003) 534
Singh, J., *see* Ratto, M.H., (59) (2003) 413
Sirard, M.A., *see* Ali, A., (59) (2003) 482
Sirard, M.A., *see* Ali, A.A., (59) (2003) 939
Sirisathien, S., Hernandez-Fonseca, H.J., Bosch, P., Hollet, B.R., Lott, J.D. and Brackett, B.G., Effect of leukemia inhibitory factor on bovine embryos produced in vitro under chemically defined conditions, (59) (2003) 1751
Skidmore, J.A., *see* Morfeld, K.A., (59) (2003) 400
Skrzyszowska, M., *see* Samiec, M., (59) (2003) 286
Slota, E., *see* Bugno, M., (59) (2003) 1597
Smeaton, D.C., Harris, B.L., Xu, Z.Z. and Vivanco, W.H., Factors affecting commercial application of embryo technologies in New Zealand: a modelling approach, (59) (2003) 617
Smith, L., *see* Bureau, W., (59) (2003) 239
Smith, M.F., *see* Mao, J., (59) (2003) 410
Smorag, Z., *see* Samiec, M., (59) (2003) 286
Smorąg, Z., *see* Kątska-Książkiewicz, L., (59) (2003) 1567
Sneek, L., *see* Baldassarre, H., (59) (2003) 236
Sneek, L., *see* Baldassarre, H., (59) (2003) 831
Söderquist, L., *see* Gil, J., (59) (2003) 1157
Söderquist, L., *see* Gil, J., (59) (2003) 1241
Soede, N.M., *see* Langendijk, P., (59) (2003) 849
Sohn, S.H., *see* Park, H.S., (59) (2003) 278
Solti, L., *see* Pribenszky, C., (59) (2003) 309
Solti, L., *see* Pribenszky, C., (59) (2003) 329
Somekawa, S., *see* Ikeda, S., (59) (2003) 489
Somfai, T., Kikuchi, K., Onishi, A., Iwamoto, M., Fuchimoto, D., BaliPapp, A., Sato, E. and

Nagai, T., Effects of invasive adenylat cyclase, 3-isobutyl 1-methylxanthine and dibutyryl cyclic AMP on IVM, IVF and IVC of porcine oocytes, (59) (2003) 498
Somfai, T., *see* Dinnyes, A., (59) (2003) 299
Son, D.S., *see* Park, S.J., (59) (2003) 227
Son, H.Y., *see* Koo, B.S., (59) (2003) 266
Sonoki, S., *see* Kashiwazaki, N., (59) (2003) 423
Sonstegard, T., *see* Zuelke, K., (59) (2003) 435
Spillings, B., *see* Bartels, P., (59) (2003) 387
Spillings, B., *see* Herold, F.C., (59) (2003) 393
Spindler, R.E., Huang, Y., Howard, J.G., Zhang, G., Wang, P., Zhang, H. and Wildt, D.E., Cryopreservation reduces uptake of pyruvate by giant panda sperm but not glucose, (59) (2003) 315
Spindler, R.E., *see* Morato, R.G., (59) (2003) 399
Squillacioti, C., *see* Mirabella, N., (59) (2003) 1999
Squires, E.L., Carnevale, E.M., McCue, P.M. and Bruemmer, J.E., Embryo technologies in the horse, (59) (2003) 151
Squires, E.L., *see* Carnevale, E.M., (59) (2003) 362
Squires, E.L., *see* Li, G.-P., (59) (2003) 1143
Squires, E.L., *see* Lindsey, A.C., (59) (2003) 510
Squires, E.L., *see* Maclellan, L.J., (59) (2003) 306
Srinivas, K., *see* Mamo, S., (59) (2003) 427
Sritanaudomchai, H., *see* Saikhun, J., (59) (2003) 284
Staines, M.E., *see* Mitchell, L.M., (59) (2003) 347
Stewart, T.S., *see* Stroble, K.A., (59) (2003) 212
Stilley, K.S., Lane, M. and Gardner, D.K., Heterologous co-culture of bovine embryos with mouse embryos stimulates blastocyst development and differentiation, (59) (2003) 459
Stilley, K.S., *see* Hewitt, E.A., (59) (2003) 420
Stockhofe-Zurwieden, N., *see* Kruip, T.A.M., (59) (2003) 1651
Stojkovic, M., *see* Hiendleder, S., (59) (2003) 257
Strachan, L., *see* Phillips, T.C., (59) (2003) 1441
Stranzinger, G.F., *see* Ménétrey, F., (59) (2003) 211
Strøbech, L., *see* Avery, B., (59) (2003) 987
Strejcek, F., *see* Bjerrregaard, B., (59) (2003) 438
Strejcek, F., *see* Faerge, I., (59) (2003) 487
Stringfellow, D.A., *see* Givens, M.D., (59) (2003) 382
Stringfellow, D.A., *see* Thibier, M., (59) (2003) 1067
Stroble, K.A., Stewart, T.S. and Krisher, R.L., Duration of cryopreservation has no effect on fertilizing ability of boar spermatozoa, (59) (2003) 212
Strzezek, J., *see* Wysocki, P., (59) (2003) 1011
Su, L., He, X., Si, W., Presicce, G.A. and Ji, W., Effect of donor age and hormonal stimulation on developmental competence of bovine oocytes retrieved by ultrasound-guided transvaginal follicular aspiration, (59) (2003) 499
Suarez, Z., *see* Lucena, E., (59) (2003) 272
Suarez-Fernandez, C.A., *see* Sartori, R., (59) (2003) 533
Sugawara, M., *see* Nishisouzu, T., (59) (2003) 531
Suh, G.H., *see* Park, S.J., (59) (2003) 227
Suh, T.K. and Schenk, J.L., Pressure during flow sorting of bull sperm affects post-thaw motility characteristics, (59) (2003) 516
Suh, T.K., *see* Tubman, L.M., (59) (2003) 517
Sullivan, B., *see* Sartori, R., (59) (2003) 533
Sullivan, E., *see* Robl, J.M., (59) (2003) 107
Sullivan, R., *see* Lessard, C., (59) (2003) 1865
Sulon, J., *see* Karen, A., (59) (2003) 1941
Sumitomo, N., *see* Saeki, K., (59) (2003) 468
Sun, X.S., *see* Liu, Z.H., (59) (2003) 775
Sun, X.S., *see* Yu, Y.S., (59) (2003) 1277
Sung, L., *see* Du, F., (59) (2003) 247
Sung, L., Xu, J., Jiang, S. and Du, F., The ffect of albumin and sodium citrat on the development of in vitro produced bovine embryos, (59) (2003) 465
Sung, L.-Y., *see* Liu, J.-L., (59) (2003) 271
Sutton, M.L., Cetica, P.D., Gilchrist, R.B. and Thompson, J.G., The metabolic profiles of bovine cumulus–oocyte complexes: effects of oocyte-secreted factors and stimulation of cumulus expansion, (59) (2003) 500
Suzuki, K., *see* Hishinuma, M., (59) (2003) 813
Suzuki, K., *see* Mori, Tadashi, (59) (2003) 371
Suzuki, M., *see* Fujino, Y., (59) (2003) 302
Suzuki, S., *see* Fuchimoto, D., (59) (2003) 418
Suzuki, S., *see* Iwamoto, M., (59) (2003) 261
Suzuki, S., *see* Mitani, T., (59) (2003) 537
Suzuki, T., *see* Dong, Y.J., (59) (2003) 246
Suzuki, T., *see* Miyashita, N., (59) (2003) 1557
Suzuki, T., *see* Mtango, N.R., (59) (2003) 456
Suzuki, T., *see* Mtango, N.R., (59) (2003) 1393
Suzuki, T., *see* Sakaguchi, M., (59) (2003) 230
Swanson, W.F., *see* Herrick, J.R., (59) (2003) 1503
Świtoński, M., *see* Bugno, M., (59) (2003) 1597
Szabados, K., *see* Karen, A., (59) (2003) 1941
Szenci, O., *see* Karen, A., (59) (2003) 1941

Tachibana, M., *see* Senbon, S., (59) (2003) 414
Taggart, D.A., *see* Druery, G.V., (59) (2003) 391
Taggart, D.A., *see* Paris, D.B.B.P., (59) (2003) 401
Tajima, S., *see* Kobayashi, S., (59) (2003) 304
Takada, N., *see* Kobayashi, J., (59) (2003) 462
Takada, T., *see* Narita, J., (59) (2003) 276
Takahagi, Y., *see* Nagashima, H., (59) (2003) 95
Takahashi, H., *see* Geshi, M., (59) (2003) 333

Takahashi, H., *see* Hirako, M., (59) (2003) 526
Takahashi, M., *see* Fuchimoto, D., (59) (2003) 418
Takahashi, M., *see* Geshi, M., (59) (2003) 333
Takahashi, M., *see* Hosoe, M., (59) (2003) 421
Takahashi, M., *see* Hosoi, Y., (59) (2003) 408
Takahashi, M., *see* Kato-Mori, Y., (59) (2003) 334
Takahashi, N., *see* Mitani, T., (59) (2003) 537
Takahashi, R., *see* Aoki, S., (59) (2003) 234
Takahashi, S., *see* Akagi, S., (59) (2003) 232
Takahashi, S., *see* Matsukawa, K., (59) (2003) 454
Takahashi, Y., *see* Hirayama, H., (59) (2003) 508
Takahashi, Y., *see* Sakaguchi, M., (59) (2003) 230
Takahashi, Y., *see* Mori, T., (59) (2003) 371
Takano, K., *see* Miki, H., (59) (2003) 521
Takeda, K., *see* Iwamoto, M., (59) (2003) 261
Takedomi, T., *see* Ideta, A., (59) (2003) 359
Takei, M., *see* Kobayashi, S., (59) (2003) 304
Takenouchi, K., *see* Kato-Mori, Y., (59) (2003) 334
Takenouchi, N., *see* Bing, Y.Z., (59) (2003) 470
Takenouchi, N., *see* Bing, Y.Z., (59) (2003) 863
Takizawa, A., *see* Nakai, M., (59) (2003) 522
Talavera, C., *see* Palasz, A.T., (59) (2003) 402
Talbot, N.C., *see* Powell, A.M., (59) (2003) 281
Tamas, S., *see* Fuchimoto, D., (59) (2003) 418
Tan, J.H., *see* Liu, Z.H., (59) (2003) 775
Tan, J.H., *see* Yu, Y.S., (59) (2003) 1277
Tan, L.G., *see* Chen, N.Q., (59) (2003) 472
Tang, R.T., *see* Long, C.R., (59) (2003) 139
Tarantal, A.F., *see* VandeVoort, C.A., (59) (2003) 699
Tartaglione, M., *see* Matás, C., (59) (2003) 463
Tasripoo, K., *see* Parnpai, R., (59) (2003) 279
Tatham, B.G., Feehan, T. and Pashen, R., Buffalo and cattle hybrid embryo development is decreased by caffeine treatment during in vitro fertilization, (59) (2003) 709
Tatham, B.G., Pashen, R., Jayawardhana, G. and Lemcke, B., Superovulation in water buffalo is influenced by protocol and breed differences, (59) (2003) 404
Tavares, L.M.T., *see* Assumpcao, M.E.O.A., (59) (2003) 297
Tavares, L.M.T., *see* Lima, A.S., (59) (2003) 452
Taveiros, A.W., Oliveira, M.A.L., Santos Filho, J.P., Lima, P.F., Tenório Filho, F., Barros, M.A.S.M., Pina, V.M.R., Azevedo, J.B., Bello, A.C. and Oliveira, L.R.S., Pregnancy rates after the transfer of embryos into recipient mares of different reproductive status, (59) (2003) 377
Taylor, P., *see* Sansinena, M., (59) (2003) 287
Taylor, S., *see* Sansinena, M., (59) (2003) 287
Taylor, V.J., Beever, D.E., Bryant, M.J. and Claire Wathes, D., Metabolic profiles and progesterone cycles in first lactation dairy cows, (59) (2003) 1661
Techakumphu, M., Promdireg, A., Na Chiengmai, A. and Phutikanit, N., Repeat ovum pick-up in prepubertal swamp buffalo (*bubalus bubalis*), (59) (2003) 540
Techakumphu, M., *see* Apimeteetumrong, M., (59) (2003) 235
Teixeira, C.M., *see* Alves, B.C.A., (59) (2003) 1415
Tekin, S. and Hansen, P.J., Lymphocyte-mediated lysis of sheep chorion: susceptibility of chorionic cells to third-party and maternal cytotoxic lymphocytes and presence of cells in the endometrium exhibiting cytotoxicity toward natural-killer cell targets, (59) (2003) 787
Temple-Smith, P.D., *see* Druery, G.V., (59) (2003) 391
Tenório Filho, F., *see* Andrade, J.C.O., (59) (2003) 358
Tenório Filho, F., *see* Oliveira, D.F.F., (59) (2003) 375
Tenório Filho, F., *see* Taveiros, A.W., (59) (2003) 377
Terao, K., *see* Narita, J., (59) (2003) 276
Terao, T., *see* Hochi, S., (59) (2003) 303
Terawaki, Y., *see* Aoki, S., (59) (2003) 234
Teresa Rigau, A., *see* Quintero-Moreno, A., (59) (2003) 1973
Ternovskaya, Y., *see* Piltti, K., (59) (2003) 403
Tervit, H.R., *see* Berg, D.K., (59) (2003) 406
Tervit, H.R., *see* Pugh, A., (59) (2003) 310
Tervit, H.R., *see* Pugh, A., (59) (2003) 311
Tervit, H.R., *see* Wells, D.N., (59) (2003) 45
Tesfaye, D., Wimmers, K., Gilles, M., Schellander, K. and Ponsuksili, S., Differential screening of embryonic ests derived from differential display using real-time PCR technique, (59) (2003) 434
Thanh, N.T., *see* Duc, N.H., (59) (2003) 442
Thanh, N.T., *see* Hanh, N.V., (59) (2003) 488
Thanh, N.T., *see* Ty, L.V., (59) (2003) 290
Thatcher, W.W., *see* Bartolome, J., (59) (2003) 1991
Thatcher, W.W., *see* Cavestany, D., (59) (2003) 1787
Theunisen, W., *see* Herold, F.C., (59) (2003) 393
Thibier, M. and Stringfellow, D.A., Health and Safety Advisory Committee (HASAC) of the International Embryo Transfer Society (IETS) has managed critical challenges for two decades, (59) (2003) 1067
Thomas, R.E., Thompson, J.G., Armstrong, D.T. and Gilchrist, R.B., Bovine oocyte-cumulus cell gap junctional communication during in vitro maturation in response to cell-specific phosphodiesterase inhibitors, (59) (2003) 501

Thomassen, R., *see* Watson, E.D., (59) (2003) 1181
Thompson, J.G., *see* Harvey, A.J., (59) (2003) 208
Thompson, J.G., *see* Sutton, M.L., (59) (2003) 500
Thompson, J.G., *see* Thomas, R.E., (59) (2003) 501
Thomsen, P.D., *see* Pedersen, H.G., (59) (2003) 430
Thuan, N.V., Wakayama, T., Thuy, B.H., Harayama, H., Miyano, T. and Miyake, M., The presence of non-polar essential amino acids in a medium before the 4-cell stage disrupts actin filament distribution in porcine parthenogenetic diploids, (59) (2003) 351
Thuy, B.H., *see* Thuan, N.V., (59) (2003) 351
Tian, X., *see* Jeong, B.S., (59) (2003) 422
Tian, X.C., *see* Enright, B.P., (59) (2003) 251
Tian, X.C., *see* Liu, J.-L., (59) (2003) 271
Tian, X.C., *see* Wang, L., (59) (2003) 535
Tischner, M., *see* Bugno, M., (59) (2003) 1597
Tokunaga, T., *see* Horii, T., (59) (2003) 1257
Tokunaga, T., *see* Hosoe, M., (59) (2003) 421
Tolland, *see* Du, F., (59) (2003) 247
Tomizuka, K., *see* Robl, J.M., (59) (2003) 107
Torii, R., *see* Narita, J., (59) (2003) 276
Touen, K., *see* Hirayama, H., (59) (2003) 508
Tribulo, H., *see* Moreno, D., (59) (2003) 370
Tribulo, R., *see* Cutaia, L., (59) (2003) 216
Tribulo, R., *see* Moreno, D., (59) (2003) 370
Troskie, H., *see* Saywell, D., (59) (2003) 312
Trounson, A., *see* Cleary, M., (59) (2003) 388
Trounson, A.O., *see* Hayes, E.S., (59) (2003) 365
Trounson, A.O., *see* Roh, S., (59) (2003) 283
Trounson, A.O., *see* Vassiliev, I., (59) (2003) 523
Trounson, A.O., *see* West, M., (59) (2003) 405
Tschümperlin, K.M., *see* Reist, M., (59) (2003) 1707
Tsuboi, T., Bielanski, A., Hanniman, A. and Raby, G., Susceptibility of in vitro immatured oocytes to non-cytopathogenic bovine viral diarrhea virus, (59) (2003) 385
Tubman, L.M., Brink, Z., Suh, T.K., Seidel Jr., G. and Normality of calves resulting from sexed sperm, (59) (2003) 517
Tucker, F.C., *see* Wells, D.N., (59) (2003) 45
Turini, P., *see* Galli, C., (59) (2003) 599
Twagiramungu, H., *see* Lessard, C., (59) (2003) 1865
Ty, L.V., Hanh, N.V., Uoc, N.T., Duc, N.H., Thanh, N.T., Bui, L.C., Huu, Q.X. and Nguyen, B.X., Preliminary results of cell cryobanking and embryo production of black bear (*Ursus thibetanus*) by interspecies somatic cell nuclear transfer, (59) (2003) 290
Ty, L.V., *see* Duc, N.H., (59) (2003) 442
Ty, L.V., *see* Hanh, N.V., (59) (2003) 488
Uchida, M., *see* Hoshino, Y., (59) (2003) 260
Uchoa, D.C., *see* Cardoso, R.d.C.S., (59) (2003) 743
Uchoa, D.C., *see* Silva, A.R., (59) (2003) 821
Ueda, H., *see* Kurome, M., (59) (2003) 267
Umeki, H., *see* Miyashita, N., (59) (2003) 1557
Unemori, E.N., *see* Hayes, E.S., (59) (2003) 365
Uoc, N.T., *see* Duc, N.H., (59) (2003) 442
Uoc, N.T., *see* Hanh, N.V., (59) (2003) 488
Uoc, N.T., *see* Ty, L.V., (59) (2003) 290
Urakawa, M., *see* Ideta, A., (59) (2003) 359
Ushijima, H., Esaki, R., Yoshioka, H., Kuwayama, M., Nakane, T. and Nagashima, H., Improved survival of cryopreserved porcine morulae, (59) (2003) 316
Ushijima, H., *see* Bao, S., (59) (2003) 1231
Ushijima, H., *see* Esaki, R., (59) (2003) 300

Vajta, G., Overstrom, E.W., Peura, T.T., Bartels, P. and Callesen, H., Chimaeras from hand-made cloned (HMC) and IVP bovine embryos: an efficient system for production and cell allocation tracking, (59) (2003) 291
Vajta, G., *see* Peura, T.T., (59) (2003) 280
Valdez, A., *see* Salamone, D.F., (59) (2003) 285
Vale Filho, V.R., *see* Camargo, L.S.A., (59) (2003) 338
Valtonen, M., *see* Lindeberg, H., (59) (2003) 368
Valtonen, M., *see* Piltti, K., (59) (2003) 403
van Arendonk, J.A.M. and Bijma, P., Factors affecting commercial application of embryo technologies in dairy cattle in Europe—a modelling approach, (59) (2003) 635
van Arendonk, J.A.M. and Liinamo, A.-E., Dairy cattle production in Europe, (59) (2003) 563
van der Ven, H., *see* Giller, H., (59) (2003) 473
van der Weijden, G.C., *see* Knijn, H.M., (59) (2003) 325
Van Hoosear, K., *see* Fieni, F., (59) (2003) 1515
Van Lier, E., *see* Cavestany, D., (59) (2003) 1787
van Niekerk, M., *see* Bartels, P., (59) (2003) 387
van Rens, B.T.T.M., Evans, G.J. and Lende, T.v.d., Components of litter size in gilts with different prolactin receptor genotypes, (59) (2003) 915
van Roermund, H.J.W., *see* Kruip, T.A.M., (59) (2003) 1651
Van Soom, A., Mateusen, B., Maes, D. and de Kruif, A., Fragmentation and apoptosis in bovine embryos, (59) (2003) 352
Van Soom, A., *see* De Pauw, I.M.C., (59) (2003) 1093
Van Soom, A., *see* De Pauw, I.M.C., (59) (2003) 1109
Van Soom, A., *see* Verberckmoes, S., (59) (2003) 231

Van Soom, A., *see* Yuan, Y.Q., (59) (2003) 1585
Van Zeveren, A., *see* Yuan, Y.Q., (59) (2003) 1585
Vander Zwaag, D.F., *see* Faber, D.C., (59) (2003) 125
VandeVoort, C.A., Leibo, S.P. and Tarantal, A.F., Improved collection and developmental competence of immature macaque oocytes, (59) (2003) 699
Varisanga, M.D., *see* Dong, Y.J., (59) (2003) 246
Varisanga, M.D., *see* Mtango, N.R., (59) (2003) 456
Varisanga, M.D., *see* Mtango, N.R., (59) (2003) 1393
Varner, D.D., *see* Brinsko, S.P., (59) (2003) 735
Varner, D.D., *see* Brinsko, S.P., (59) (2003) 1001
Varner, D.D., *see* Choi, Y.-H., (59) (2003) 1219
Varner, D.D., *see* Love, L.B., (59) (2003) 765
Varricchio, E., *see* Mirabella, N., (59) (2003) 1999
Vassena, R., *see* Bagg, M.A., (59) (2003) 436
Vassena, R., *see* Brevini, T.A.L., (59) (2003) 440
Vassiliev, I., Trounson, A.O. and Verma, P.J., Evaluation of activation protocols for bovine intracytoplasmic sperm injection, (59) (2003) 523
Vazquez, J.L., *see* Vazquez, J.M., (59) (2003) 1605
Vazquez, J.M., Martinez, E.A., Parrilla, I., Roca, J., Gil, M.A. and Vazquez, J.L., Birth of piglets after deep intrauterine insemination with flow cytometrically sorted boar spermatozoa, (59) (2003) 1605
Vazquez, J.M., *see* Cremades, T., (59) (2003) 298
Velez, C., *see* Serrano, C., (59) (2003) 469
Verberckmoes, S., De Pauw, I., Van Soom, A., Dewulf, J. and de Kruif, A., Comparison of bovine sperm quality after 6 days of storage in Caprogen® or CEP-diluter, (59) (2003) 231
Verberckmoes, S., *see* De Pauw, I.M.C., (59) (2003) 1093
Verberckmoes, S., *see* De Pauw, I.M.C., (59) (2003) 1109
Verheijden, J., *see* Kidson, A., (59) (2003) 1889
Verheijden, J.H.M., *see* Schoevers, E.J., (59) (2003) 2017
Verkerk, G., Pasture-based dairying: challenges and rewards for New Zealand producers, (59) (2003) 553
Verma, P.J., *see* Vassiliev, I., (59) (2003) 523
Vermeulen, Z.L., *see* Merton, J.S., (59) (2003) 346
Viana, J.H.M., Camargo, L.S.A., Ferreira, A.M., Sa, W.F., Ramos, A.A. and Marques Junior, A.P., Effect of norgestomet on intrafollicular steroidogenic activity, follicular dynamics and endocrine patterns of zebu cows undergoing repeated oocyte pick-up, (59) (2003) 415
Viana, J.H.M., *see* Camargo, L.S.A., (59) (2003) 338
Viana, J.H.M., *see* Vireque, A.A., (59) (2003) 503
Vic., *see* Curnow, E.C., (59) (2003) 363
Vignon, X., *see* Apimeteetumrong, M., (59) (2003) 235
Vignon, X., *see* Servely, J.L., (59) (2003) 288
Villa-Diaz, L.G. and Miyano, T., A novel MAPK family member is involved in meiotic maturation of porcine oocytes: p38 MAPK, (59) (2003) 502
Villata, M.L., *see* Moreno, D., (59) (2003) 370
Vireque, A.A., Rosa-e-Silva, A.A.M., Sa, W.F., Viana, J.H.M. and Camargo, L.S.A., Bovine oocyte maturation in co-culture with estradiol-17β producing granulosa cells in chemically defined cultur medium, (59) (2003) 503
Vishwanath, R., Artificial insemination: the state of the art, (59) (2003) 571
Visintin, J.A., *see* Assumpcao, M.E.O.A., (59) (2003) 297
Visintin, J.A., *see* Lima, A.S., (59) (2003) 452
Visser, A., *see* Barry, D.M., (59) (2003) 337
Viuff, D., *see* Pedersen, H.G., (59) (2003) 430
Vivanco, W.H., *see* Smeaton, D.C., (59) (2003) 617
Viveiros, A.T.M., Jatzkowski, A. and Komen, J., Effects of oxytocin on semen release response in African catfish (*Clarias gariepinus*), (59) (2003) 1905
von Euw, D., *see* Reist, M., (59) (2003) 1707
Vos, P.L.A.M., Fokker, H.W., Knijn, H.M. and Dieleman, S.J., Embryonic development in vivo relative to the preovulatory LH surge after superovulation with a controlled LH surge in heifers, (59) (2003) 332
Vos, P.L.A.M., *see* Knijn, H.M., (59) (2003) 325
Vos, P.L.A.M., *see* Merton, J.S., (59) (2003) 651
Vosloo, W., *see* Jooste, F., (59) (2003) 443

WA, *see* Curnow, E.C., (59) (2003) 363
Wade, M., *see* Lonergan, P., (59) (2003) 493
Wade, M., *see* Papadopoulos, S., (59) (2003) 458
Wagener, A., *see* Goeritz, F., (59) (2003) 1487
Wagner, T.E., *see* Modlinski, J.A., (59) (2003) 357
Wakai, T., *see* Kawahara, M., (59) (2003) 262
Wakayama, T., *see* Thuan, N.V., (59) (2003) 351
Wako, N., *see* Kurome, M., (59) (2003) 267
Wako, N., *see* Nagashima, H., (59) (2003) 95
Walker, S.C., *see* Long, C.R., (59) (2003, 139
Walker, S.K., *see* Chang, W.C., (59) (2003) 241
Walker, S.K., *see* Hamilton, H.M., (59) (2003) 255
Walker, S.K., *see* Hartwich, K.M., (59) (2003) 256

Walker, S.K., *see* Kakar, M.A., (59) (2003) 527
Walker, S.K., *see* Kelly, J.M., (59) (2003) 449
Walker, S.K., *see* Maddox-Hyttel, P., (59) (2003) 273
Walker, S.K., *see* Peura, T.T., (59) (2003) 280
Wall, R.J., *see* Powell, A.M., (59) (2003) 281
Walters, E.M., Clark, S.G., Roseman, H.M., Beebe, D.J. and Wheeler, M.B., Production of live piglets following in vitro embryo culture in a microfluidic environment, (59) (2003) 353
Walters, M., *see* Clark, S.G., (59) (2003) 441
Wang, B., *see* Baldassarre, H., (59) (2003) 236
Wang, B., *see* Baldassarre, H., (59) (2003) 831
Wang, B., *see* Keefer, C.L., (59) (2003) 263
Wang, B., *see* Rao, K.M., (59) (2003) 538
Wang, H., *see* Si, W., (59) (2003) 314
Wang, L., Jeong, B.S., Duan, E. and Tian, X.C., Effect of donor cell age on number of population doublings of feline fibroblasts cultured in vitro, (59) (2003) 535
Wang, M.K. and Overstrom, E.W., Effects of procedures and medium on induced enucleation and development of cloned CF1 mouse embryos, (59) (2003) 292
Wang, P., *see* Spindler, R.E., (59) (2003) 315
Wang, Y., *see* Sarmento, O., (59) (2003) 330
Ward, F., Rizos, D., Boland, M.P. and Lonergan, P., Effect of reducing sperm concentration during IVF on the ability to distinguish between bulls of high and low field fertility: work in progress, (59) (2003) 1575
Watanabe, A., *see* Dinnyes, A., (59) (2003) 299
Watanabe, A., *see* Kobayashi, J., (59) (2003) 462
Watanabe, K., *see* Hirayama, H., (59) (2003) 508
Watanabe, S., *see* Fuchimoto, D., (59) (2003) 418
Watson, E.D., Thomassen, R. and Nikolakopoulos, E., Association of uterine edema with follicle waves around the onset of the breeding season in pony mares, (59) (2003) 1181
Wee, K.I., *see* Lee, K.K., (59) (2003) 491
Weigl, R.M., *see* Grazul-Bilska, A.T., (59) (2003) 1449
Wells, D.N., Laible, G., Tucker, F.C., Miller, A.L., Oliver, J.E., Xiang, T., Forsyth, J.T., Berg, M.C., Cockrem, K., L'Huillier, P.J., Tervit, H.R. and Oback, B., Coordination between donor cell type and cell cycle stage improves nuclear cloning efficiency in cattle, (59) (2003) 45
Wells, K.D., *see* Powell, A.M., (59) (2003) 281
Wells, N.H., Hallford, D.M. and Hernandez, J.A., Serum thyroid hormones and reproductive characteristics of Rambouillet ewe lambs treated with propylthiouracil before puberty, (59) (2003) 1403
Wenigerkind, H., *see* Hiendleder, S., (59) (2003) 257
Werning, C., *see* Salamone, D.F., (59) (2003) 285
Wessel, M.T., *see* Ball, B.A., (59) (2003) 901
West, M., Paris, M.C.J., Cleary, M., Shaw, J., Galloway, D. and Trounson, A.O., In vitro maturation (IVM) of oocytes collected following hormonal ovarian stimulation of common wombats (*vombatus ursinus*), (59) (2003) 405
West, M., *see* Cleary, M., (59) (2003) 388
Westhusin, M.E., *see* Long, C.R., (59) (2003) 139
Whang, C.S., *see* Jun, J.H., (59) (2003) 324
Wheeler, M.B., *see* Walters, E.M., (59) (2003) 353
Wheeler, M.B., *see* Clark, S.G., (59) (2003) 441
Whisnant, C., *see* Willard, S., (59) (2003) 1799
Wilde, R.E., *see* Gavaga, Q.A., (59) (2003) 221
Wilding, M., Gasparrini, B., Neglia, G., Dale, B. and Zicarelli, L., Mitochondrial activity and fertilization potential of fresh and cryopreserved buffalo sperm, (59) (2003) 466
Wildt, D., *see* Morato, R.G., (59) (2003) 399
Wildt, D.E., *see* Spindler, R.E., (59) (2003) 315
Willard, S., Gandy, S., Bowers, S., Graves, K., Elias, A. and Whisnant, C., The effects of GnRH administration postinsemination on serum concentrations of progesterone and pregnancy rates in dairy cattle exposed to mild summer heat stress, (59) (2003) 1799
Williams, J.L., *see* Destrempes, M.M., (59) (2003) 245
Wilmut, I., *see* Gao, S., (59) (2003) 253
Wilmut, I., *see* Pallante, B., (59) (2003) 277
Wilson, K., *see* Ruddock, N.T., (59) (2003) 432
Wilson, M.E., *see* Rozeboom, K.J., (59) (2003) 229
Wiltbank, M.C., *see* Sartori, R., (59) (2003) 533
Wimmers, K., *see* Mamo, S., (59) (2003) 427
Wimmers, K., *see* Nabiev, D., (59) (2003) 226
Wimmers, K., *see* Tesfaye, D., (59) (2003) 434
Wirtu, G., Damiani, P., Bavister, B., Miller, F., Dresser, B., Godke, R. and Pope, E., Effects of eland and bovine serum on the development of in vitro-derived bovine embryos, (59) (2003) 354
Wirtu, G., *see* Damiani, P., (59) (2003) 390
Wishart, G.J., *see* Barna, J., (59) (2003) 1685
Wolf, D.P., *see* Mitalipov, S.M., (59) (2003) 429
Wolf, E., *see* Hiendleder, S., (59) (2003) 257
Woodbury, M., *see* Kemp, K.E., (59) (2003) 395
Woodbury, M., *see* McCorkell, R.B., (59) (2003) 398
Wrenzycki, C., Herrmann, D., Holm, P., Callesen, H. and Niemann, H., Effects of reversible

inhibition of meiosis on messenger RNA expression patterns in bovine oocytes, (59) (2003) 504
Wrenzycki, C., *see* Herrmann, D., (59) (2003) 419
Wrenzycki, C., *see* Lucas-Hahn, A., (59) (2003) 356
Wright, P., *see* Sarmento, O., (59) (2003) 330
Wu, G., *see* Mao, J., (59) (2003) 410
Wu, G.M., *see* Caamano, J.N., (59) (2003) 361
Wu, J.S., *see* Shen, P.C., (59) (2003) 289
Wysocki, P. and Strzezek, J., Purification and characterization of a protein tyrosine acid phosphatase from boar seminal vesicle glands, (59) (2003) 1011

Xiang, T., *see* Wells, D.N., (59) (2003) 45
Xu, J., Jiang, S. and Du, F., Comparison of the developmental competenc of in vitro fertilized bovine oocytes after maturation in M199 medium supplemented with growth factor and gonadotropins, (59) (2003) 505
Xu, J., *see* Du, F., (59) (2003) 247
Xu, J., *see* Liu, J.-L., (59) (2003) 271
Xu, J., *see* Sung, L., (59) (2003) 465
Xu, Z.Z., *see* Smeaton, D.C., (59) (2003) 617
Xue, F., *see* Jeong, B.S., (59) (2003) 422

Yamada, M., *see* Hoshino, Y., (59) (2003) 260
Yamada, M., *see* Ikeda, S., (59) (2003) 489
Yamada, Y., *see* Sakaguchi, M., (59) (2003) 230
Yamaguchi, R., *see* Kashiwazaki, N., (59) (2003) 423
Yamamoto, Y., *see* Matsumoto, K., (59) (2003) 428
Yamamoto, Y., *see* Miki, H., (59) (2003) 521
Yamanaka, K., *see* Kawahara, M., (59) (2003) 262
Yamashina, H., *see* Hirayama, H., (59) (2003) 508
Yamashita, C., *see* Esaki, R., (59) (2003) 300
Yamazaki, T., *see* Nakata, K., (59) (2003) 275
Yamazaki, W., Ferreira, C.R., Meo, S.C., Leal, C.L.V., Meirelles, F. and Garcia, J.M., Normal offspring produced by somatic cell nuclear transfer in bovine using strontium and ionomycin as activating agents, (59) (2003) 293
Yamazaki, W., *see* Meo, S.C., (59) (2003) 476
Yang, B.-C., Im, G.-S., Seong, H.-H., Im, S.-K., Sakiko, M., Park, S.-B., Chang, W.-K., Im, K.-S. and Lee, C.K., Development of nuclear-transfer embryos using vitrified-warmed in vitro-matured bovine oocytes, (59) (2003) 317
Yang, B.C., *see* Seong, H.H., (59) (2003) 336
Yang, B.-K., *see* Choi, J.-Y., (59) (2003) 244
Yang, B.K., *see* Hwang, I.S., (59) (2003) 461
Yang, X., *see* Bormann, C.L., (59) (2003) 471
Yang, X., *see* Lee, J.-W., (59) (2003) 305
Yang, X., *see* Liu, J.-L., (59) (2003) 271
Yang, X., *see* Nedambale, T.L., (59) (2003) 307
Yániz, J., *see* López-Gatius, F., (59) (2003) 801
Yin, X.J., Cho, S.K., Park, M.R., Cho, H.Y., Im, Y.J., Park, J.J., Bhak, J.S. and Kim, J.H., Production of cloned piglets by transfer of fetal fibroblasts into enucleated oocytes, (59) (2003) 294
Yin, X.J., *see* Cho, S.K., (59) (2003) 518
Yip, W.Y., *see* Chen, N.Q., (59) (2003) 472
Yodoi, J., *see* Bing, Y.Z., (59) (2003) 863
Yokomizo, Y., *see* Geshi, M., (59) (2003) 333
Yonemura, I., Miyamoto, K. and Nishida, M., Non-surgical transfer of porcine embryos, (59) (2003) 378
Yonemura, I., *see* Fujino, Y., (59) (2003) 302
Yoshioka, H., *see* Esaki, R., (59) (2003) 300
Yoshioka, H., *see* Ushijima, H., (59) (2003) 316
Yotsushima, K., Hasunuma, T., Shimizu, M., Okimura, T., Sano, M. and Sakaguchi, M., DNA fragmentation and developmental competence of bovine oocytes reconstructed from the adult cells before and after serum starvation, (59) (2003) 295
Yovich, J.L., *see* Junk, S.M., (59) (2003) 1741
Yu, Y.S., Sun, X.S., Jiang, H.N., Han, Y., Zhao, C.B. and Tan, J.H., Studies of the cell cycle of in vitro cultured skin fibroblasts in goats: work in progress, (59) (2003) 1277
Yuan, Y.Q., Van Soom, A., Coopman, F.O.J., Mintiens, K., Boerjan, M.L., Van Zeveren, A., de Kruif, A. and Peelman, L.J., Influence of oxygen tension on apoptosis and hatching in bovine embryos cultured in vitro, (59) (2003) 1585
Yue, K.Z., *see* Liu, Z.H., (59) (2003) 775

Zahedi, A., *see* Memili, E., (59) (2003) 274
Zakhartchenko, V., *see* Hiendleder, S., (59) (2003) 257
Zbinden, Y., *see* Reist, M., (59) (2003) 1707
Zehnder, C.M, *see* Dahlen, C.R., (59) (2003) 1827
Zeuner, A., Müller, K., Reguszynski, K. and Jewgenow, K., Apoptosis within bovine follicular cells and its effect on oocyte development during in vitro maturation, (59) (2003) 1421
Zhang, G., *see* Spindler, R.E., (59) (2003) 315
Zhang, H., *see* Spindler, R.E., (59) (2003) 315
Zhang, M., *see* Matsumoto, K., (59) (2003) 428
Zhang, T., Liu, X.-H. and Rawson, D.d.M., Effects of methanol and developmental arrest on chilling injury in zebrafish (*Danio rerio*) embryos, (59) (2003) 1545
Zhao, C.B., *see* Yu, Y.S., (59) (2003) 1277

Zheng, P., *see* Si, W., (59) (2003) 314
Zhou, J.F., *see* Baldassarre, H., (59) (2003) 831
Zhou, J.F., *see* Keefer, C.L., (59) (2003) 263
Zhou, Q., Jouneau, A., Brochard, V., Fremond, C., Ryffel, B. and P. Renard, J., Long-lasting physiological disorders exhibited by mouse from nuclear transfer, (59) (2003) 296
Zi, X.-D., Reproduction in female yaks (*Bos grunniens*) and opportunities for improvement, (59) (2003) 1303
Zicarelli, L., *see* Gasparrini, B., (59) (2003) 321
Zicarelli, L., *see* Neglia, G., (59) (2003) 374
Zicarelli, L., *see* Neglia, G., (59) (2003) 1123
Zicarelli, L., *see* Wilding, M., (59) (2003) 466
Zongo, M., *see* de Sousa, N.M., (59) (2003) 1131
Zuelke, K., Blomberg, L.A., Long, L. and Sonstegard, T., Serial analysis of gene expression (SAGE) comparisons between Day 11 and Day 12 porcine embryos, (59) (2003) 435

ELSEVIER

Theriogenology 59 (2003) 2083–2107

Theriogenology

Subject Index, Volume 59

Abortion

Abortifacient and endocrine effects of metergoline in beagle bitches during the second half of gestation, 59 (2003) 1929

Accessory glands

Seasonal timing of sperm production in roe deer: interrelationship among changes in ejaculate parameters, morphology and function of testis and accessory glands, 59 (2003) 1487

Acid phosphatase

Purification and characterization of a protein tyrosine acid phosphatase from boar seminal vesicle glands, 59 (2003) 1011

Acrosome reaction

Changes in the distribution of lectin receptors during capacitation and acrosome reaction in boar spermatozoa, 59 (2003) 1171

Age

Reproductive period affects lipid composition and quality of fresh and stored spermatozoa in Turkeys, 59 (2003) 753

Aging

Normal telomere lengths of spermatozoa in somatic cell-cloned bulls, 59 (2003) 1557

Angiotensin

Activity of angiotensin-converting enzyme (ACE) in reproductive tissues of the stallion and effects of angiotensin II on sperm motility, 59 (2003) 901

Angiotensin-converting enzyme

Activity of angiotensin-converting enzyme (ACE) in reproductive tissues of the stallion and effects of angiotensin II on sperm motility, 59 (2003) 901

Antibiotic treatment

Comparison of two protocols for the treatment of retained fetal membranes in dairy cattle, 59 (2003) 951

Anticaspase

Efficacy of the anticaspase agent zVAD-fmk on post-thaw viability of canine spermatozoa, 59 (2003) 1525

Apoptosis

Effects of pregnant mare serum gonadotropin (eCG) on follicle development and granulosa-cell apoptosis in the pig, 59 (2003) 775

Studies of the cell cycle of in vitro cultured skin fibroblasts in goats: work in progress, 59 (2003) 1277

Apoptosis within bovine follicular cells and its effect on oocyte development during in vitro maturation, 59 (2003) 1421

Efficacy of the anticaspase agent zVAD-fmk on post-thaw viability of canine spermatozoa, 59 (2003) 1525

Influence of oxygen tension on apoptosis and hatching in bovine embryos cultured in vitro, 59 (2003) 1585

Applications

Economics of selecting for sex: the most important genetic trait, 59 (2003) 585

Artificial chromosome

Artificial chromosome vectors and expression of complex proteins in transgenic animals, 59 (2003) 107

Artificial insemination

Artificial insemination: the state of the art, 59 (2003) 571

Exogenous prostaglandin $F_2\alpha$ at time of ovulation improves reproductive efficiency in repeat breeder sows, 59 (2003) 1479

Fixed-time insemination in peripuberal, lightweight replacement beef heifers after estrus synchronization with PGF2alpha and GnRH, 59 (2003) 1827

Elsevier Science Inc.
PII: S0093-691X(03)00054-2

Assisted reproduction
Improved collection and developmental competence of immature macaque oocytes, 59 (2003) 699

Atresia
Apoptosis within bovine follicular cells and its effect on oocyte development during in vitro maturation, 59 (2003) 1421

Azawak Zebu
Pregnancy-associated glycoprotein concentrations during pregnancy and the postpartum period in Azawak Zebu cattle, 59 (2003) 1131

***Bax* gene**
Influence of oxygen tension on apoptosis and hatching in bovine embryos cultured in vitro, 59 (2003) 1585

Beef
Factors affecting commercial application of embryo technologies in New Zealand: a modelling approach, 59 (2003) 617

Beef heifers
Repeatability and accuracy of reproductive tract scoring to determine pubertal status in beef heifers, 59 (2003) 1087
Fixed-time insemination in peripuberal, lightweight replacement beef heifers after estrus synchronization with PGF2alpha and GnRH, 59 (2003) 1827

Behavior
Effects of different sexual stimuli on oxytocin release, uterine activity and receptive behavior in estrous sows, 59 (2003) 849
Behavioural development in the neonatal lamb: effect of maternal and birth-related factors, 59 (2003) 1027

Birds
Cryopreservation of semen from endangered pheasants: the first step towards a cryobank for endangered avian species, 59 (2003) 875

Bitch
Abortifacient and endocrine effects of metergoline in beagle bitches during the second half of gestation, 59 (2003) 1929

Blastocyst
In vitro maturation of bovine cumulus–oocyte complexes in undiluted follicular fluid: effect on nuclear maturation, pronucleus formation and embryo development, 59 (2003) 987
FSH priming improves oocyte maturation, but priming with FSH or hCG has no effect on subsequent embryonic development in an in vitro maturation program, 59 (2003) 1741
Effect of leukemia inhibitory factor on bovine embryos produced in vitro under chemically defined conditions, 59 (2003) 1751
Effect of leukemia inhibitory factor on bovine embryos produced in vitro under chemically defined conditions, 59 (2003) 1827

Blastocyst cell numbers
The effect of oviductal epithelial cell co-culture during in vitro maturation on sow oocyte morphology, fertilization and embryo development, 59 (2003) 1889

Blastocyst hatching
The effect of oviductal epithelial cell co-culture during in vitro maturation on sow oocyte morphology, fertilization and embryo development, 59 (2003) 1889

Boar
Purification and characterization of a protein tyrosine acid phosphatase from boar seminal vesicle glands, 59 (2003) 1011

Boar sperm
Changes in the distribution of lectin receptors during capacitation and acrosome reaction in boar spermatozoa, 59 (2003) 1171

Body condition score
Effects of body condition score and score change on the reproductive performance of dairy cows: a meta-analysis, 59 (2003) 801

Bovine
Bovine embryo technologies, 59 (2003) 599
Improving successful pregnancies after embryo transfer, 59 (2003) 687
Effects of thioredoxin on the preimplantation development of bovine embryos, 59 (2003) 863
Use of two replacements of serum during bovine embryo culture in vitro, 59 (2003) 889
In vitro survival of bovine spermatozoa stored at room temperature under epididymal conditions, 59 (2003) 1093
Effect of sperm coating on the survival and penetrating ability of in vitro stored bovine spermatozoa, 59 (2003) 1109

Bovine and buffalo in vitro embryo production using oocytes derived from abattoir ovaries or collected by transvaginal follicle aspiration, 59 (2003) 1123

Intracytoplasmic sperm injection of bovine oocytes with stallion spermatozoa, 59 (2003) 1143

Development of bovine oocytes reconstructed with a nucleus from growing stage oocytes after fertilization in vitro, 59 (2003) 1231

Growth factors and growth hormone enhance in vitro embryo production and post-thaw survival of vitrified bovine blastocysts, 59 (2003) 1393

Apoptosis within bovine follicular cells and its effect on oocyte development during in vitro maturation, 59 (2003) 1421

Influence of oxygen tension on apoptosis and hatching in bovine embryos cultured in vitro, 59 (2003) 1585

Bovine embryo

Normal telomere lengths of spermatozoa in somatic cell-cloned bulls, 59 (2003) 1557

Bovine oocyte

Antioxidant requirements for bovine oocytes varies during in vitro maturation, fertilization and development, 59 (2003) 939

Bovine pestivirus

Studies of the pathogenesis of bovine pestivirus-induced ovarian dysfunction in superovulated dairy cattle, 59 (2003) 1051

bST

Effect of pretreatment with bovine somatotropin (bST) and/or gonadotropin-releasing hormone (GnRH) on conception rate of dairy cows with ovarian cysts subjected to synchronization of ovulation and timed insemination, 59 (2003) 1991

Buffalo

Buffalo and cattle hybrid embryo development is decreased by caffeine treatment during in vitro fertilization, 59 (2003) 709

Bovine and buffalo in vitro embryo production using oocytes derived from abattoir ovaries or collected by transvaginal follicle aspiration, 59 (2003) 1123

Estrus induction following PGF2α treatment in the superovulated buffalo (*Bubalus bubalis*), 59 (2003) 1203

Buffalo spermatozoa

Sephadex and sephadex ion-exchange filtration improves the quality and freezability of low-grade buffalo semen ejaculates, 59 (2003) 1189

Cabergoline

Selective control of the estrous cycle of the dog through suppression of estrus and reduction of the length of anestrus, 59 (2003) 1441

CAEV

Presence of caprine arthritis–encephalitis virus (CAEV) proviral DNA in genital tract tissues of superovulated dairy goat does, 59 (2003) 1515

Caffeine

Buffalo and cattle hybrid embryo development is decreased by caffeine treatment during in vitro fertilization, 59 (2003) 709

Calcium

Effects of Equex from different sources on post-thaw survival, longevity and intracellular Ca^{2+} concentration of dog spermatozoa, 59 (2003) 1725

Calving

In vitro production of bovine embryos and their application for embryo transfer, 59 (2003) 675

Candidate gene

Components of litter size in gilts with different prolactin receptor genotypes, 59 (2003) 915

Canine

Quality of canine semen submitted to single or fractionated glycerol addition during the freezing process, 59 (2003) 821

Capacitation

Changes in the distribution of lectin receptors during capacitation and acrosome reaction in boar spermatozoa, 59 (2003) 1171

Influence of extender, temperature, and addition of glycerol on post-thaw sperm parameters in ram semen, 59 (2003) 1241

Caprine arthritis–encephalitis virus

Presence of caprine arthritis–encephalitis virus (CAEV) proviral DNA in genital tract tissues of superovulated dairy goat does, 59 (2003) 1515

Cat

Somatic cell nuclear transfer in domestic cat oocytes treated with IGF-I for in vitro maturation, 59 (2003) 1775

Catalase

Antioxidant requirements for bovine oocytes varies during in vitro maturation, fertilization and development, 59 (2003) 939

Effect of local interaction of reactive oxygen species with prostaglandin $F_{2\alpha}$ on the release of progesterone in ovine corpora lutea in vivo, 59 (2003) 1335

Catfish

Effects of oxytocin on semen release response in African catfish (*Clarias gariepinus*), 59 (2003) 1905

Cattle

Coordination between donor cell type and cell cycle stage improves nuclear cloning efficiency in cattle, 59 (2003) 45

Artificial chromosome vectors and expression of complex proteins in transgenic animals, 59 (2003) 107

Economics of selecting for sex: the most important genetic trait, 59 (2003) 585

Factors affecting commercial application of embryo technologies in New Zealand: a modelling approach, 59 (2003) 617

Buffalo and cattle hybrid embryo development is decreased by caffeine treatment during in vitro fertilization, 59 (2003) 709

The association between lameness, ovarian cysts and fertility in lactating dairy cows, 59 (2003) 927

The effect of intrauterine administration of estradiol on postpartum uterine involution in cattle, 59 (2003) 1357

Lack of association of *Mycobacterium avium* subsp. *paratuberculosis* with oocytes and embryos from moderate shedders of the pathogen, 59 (2003) 1651

Calculated follicle deviation using segmented regression for modeling diameter differences in cattle, 59 (2003) 1811

Semen characteristics of genetically identical quadruplet bulls, 59 (2003) 1865

Cell cycle

Coordination between donor cell type and cell cycle stage improves nuclear cloning efficiency in cattle, 59 (2003) 45

Studies of the cell cycle of in vitro cultured skin fibroblasts in goats: work in progress, 59 (2003) 1277

Cell number

Use of two replacements of serum during bovine embryo culture in vitro, 59 (2003) 889

Cell type

Coordination between donor cell type and cell cycle stage improves nuclear cloning efficiency in cattle, 59 (2003) 45

Cervical AI

Fertility of ram semen frozen in Bioexcell® and used for cervical artificial insemination, 59 (2003) 1157

Cervical dilatation

Secretion patterns of oxytocin and PGF2α-metabolite in response to cervical dilatation in cyclic mares, 59 (2003) 1381

Cervine

New developments reproductive technologies in deer, 59 (2003) 189

Change of osmolarity

Stage-specific effects of the osmolarity of a culture medium on the development of parthenogenetic diploids in the pig, 59 (2003) 719

Chickens

Impact of consuming tall fescue seeds infected with the endophytic fungus, *Neotyphodium coenophialum*, on reproduction of chickens, 59 (2003) 1313

Chilling injury

Effects of methanol and developmental arrest on chilling injury in zebrafish (*Danio rerio*) embryos, 59 (2003) 1545

Chlortetracycline

Membrane changes during different stages of a freeze–thaw protocol for equine semen cryopreservation, 59 (2003) 1693

Chorionic cells

Lymphocyte-mediated lysis of sheep chorion: susceptibility of chorionic cells to third-party and maternal cytotoxic lymphocytes and presence of cells in the endometrium exhibiting cytotoxicity toward natural-killer cell targets, 59 (2003) 787

Chromatin

Mammalian epigenomics: reprogramming the genome for development and therapy, 59 (2003) 21

Cleavage

In vitro maturation of bovine cumulus–oocyte complexes in undiluted follicular fluid: effect on nuclear maturation, pronucleus formation and embryo development, 59 (2003) 987

Clone

Artificial chromosome vectors and expression of complex proteins in transgenic animals, 59 (2003) 107

Normal telomere lengths of spermatozoa in somatic cell-cloned bulls, 59 (2003) 1557

Semen characteristics of genetically identical quadruplet bulls, 59 (2003) 1865

Clone embryos

Effect of maturation media and oocytes derived from sows or gilts on the development of cloned pig embryos, 59 (2003) 1641

Cloning

Coordination between donor cell type and cell cycle stage improves nuclear cloning efficiency in cattle, 59 (2003) 45

Transgenic swine for biomedicine and agriculture, 59 (2003) 115

Commercialization of animal biotechnology, 59 (2003) 125

New commercial opportunities for advanced reproductive technologies in horses, wildlife, and companion animals, 59 (2003) 139

Bovine embryo technologies, 59 (2003) 599

Coagulation

In vitro maturation of bovine cumulus–oocyte complexes in undiluted follicular fluid: effect on nuclear maturation, pronucleus formation and embryo development, 59 (2003) 987

Coconut water

Cryopreservation of canine semen using a coconut water extender with egg yolk and three different glycerol concentrations, 59 (2003) 743

Colchicine

Intracytoplasmic sperm injection of bovine oocytes with stallion spermatozoa, 59 (2003) 1143

Commercialization

Commercialization of animal biotechnology, 59 (2003) 125

Conceptions

Exogenous prostaglandin $F_2\alpha$ at time of ovulation improves reproductive efficiency in repeat breeder sows, 59 (2003) 1479

Corpus luteum

The effects of GnRH administration postinsemination on serum concentrations of progesterone and pregnancy rates in dairy cattle exposed to mild summer heat stress, 59 (2003) 1799

Cryopreservation

Development of efficient strategies for the production of genetically modified pigs, 59 (2003) 95

Current status of embryo technologies in sheep and goat, 59 (2003) 171

Cryopreservation of canine semen using a coconut water extender with egg yolk and three different glycerol concentrations, 59 (2003) 743

Cryopreservation of semen from endangered pheasants: the first step towards a cryobank for endangered avian species, 59 (2003) 875

Sephadex and sephadex ion-exchange filtration improves the quality and freezability of low-grade buffalo semen ejaculates, 59 (2003) 1189

New technology for vitrification and field (microscope-free) warming and transfer of small ruminant embryos, 59 (2003) 1209

Efficacy of the anticaspase agent zVAD-fmk on post-thaw viability of canine spermatozoa, 59 (2003) 1525

Evaluation of fresh and frozen-thawed semen of individual ganders by assessment of spermatozoa motility and morphology, 59 (2003) 1627

Membrane changes during different stages of a freeze–thaw protocol for equine semen cryopreservation, 59 (2003) 1693

Effects of Equex from different sources on post-thaw survival, longevity and intracellular Ca^{2+} concentration of dog spermatozoa, 59 (2003) 1725

Semen characteristics of genetically identical quadruplet bulls, 59 (2003) 1865

Cumulus cells

Effects of oviductal and cumulus cells on in vitro fertilization and embryo development of porcine oocytes fertilized with epididymal spermatozoa, 59 (2003) 975

Cumulus–oocyte complex
Improved collection and developmental competence of immature macaque oocytes, 59 (2003) 699

Cysteine
Antioxidant requirements for bovine oocytes varies during in vitro maturation, fertilization and development, 59 (2003) 939

Cytoplasmic maturation
In vitro maturation of bovine cumulus–oocyte complexes in undiluted follicular fluid: effect on nuclear maturation, pronucleus formation and embryo development, 59 (2003) 987
The effect of oviductal epithelial cell co-culture during in vitro maturation on sow oocyte morphology, fertilization and embryo development, 59 (2003) 1889

Cytotoxic
Lymphocyte-mediated lysis of sheep chorion: susceptibility of chorionic cells to third-party and maternal cytotoxic lymphocytes and presence of cells in the endometrium exhibiting cytotoxicity toward natural-killer cell targets, 59 (2003) 787

Dairy
Factors affecting commercial application of embryo technologies in New Zealand: a modelling approach, 59 (2003) 617

Dairy cattle
Dairy cattle production in Europe, 59 (2003) 563
Comparison of two protocols for the treatment of retained fetal membranes in dairy cattle, 59 (2003) 951
The effects of GnRH administration post. :emination on serum concentrations of progesterone and pregnancy rates in dairy cattle exposed to mild summer heat stress, 59 (2003) 1799

Dairy cows
Effects of body condition score and score change on the reproductive performance of dairy cows: a meta-analysis, 59 (2003) 801
Postpartum reproductive function: association with energy, metabolic and endocrine status in high yielding dairy cows, 59 (2003) 1707

Dairy heifers
Metabolic profiles and progesterone cycles in first lactation dairy cows, 59 (2003) 1661

Dairying
Pasture-based dairying: challenges and rewards for New Zealand producers, 59 (2003) 553

Days open
Postpartum reproductive function: association with energy, metabolic and endocrine status in high yielding dairy cows, 59 (2003) 1707

Dead spermatozoa
Effects of dead spermatozoa on motion characteristics and membrane integrity of live spermatozoa in fresh and cooled-stored equine semen, 59 (2003) 735

Deep insemination
Birth of piglets after deep intrauterine insemination with flow cytometrically sorted boar spermatozoa, 59 (2003) 1605

Deer Synthetic Oviduct Fluid
New developments reproductive technologies in deer, 59 (2003) 189

Development
Development of bovine oocytes reconstructed with a nucleus from growing stage oocytes after fertilization in vitro, 59 (2003) 1231

Developmental arrest
Effects of methanol and developmental arrest on chilling injury in zebrafish (*Danio rerio*) embryos, 59 (2003) 1545

Developmental stage
Vitrification of rat embryos at various developmental stages, 59 (2003) 1851

Diluent
Effect of sperm coating on the survival and penetrating ability of in vitro stored bovine spermatozoa, 59 (2003) 1109

Direct transfer
Effect of leukemia inhibitory factor on bovine embryos produced in vitro under chemically defined conditions, 59 (2003) 1751
Effect of leukemia inhibitory factor on bovine embryos produced in vitro under chemically defined conditions, 59 (2003) 1827

Discriminant analysis
Screening of some variables influencing the results of embryo transfer in the ewe. Part II: Two-day-old embryos, 59 (2003) 1345

DNA

Excess nuclear DNA in spermatozoa of guinea fowl, 59 (2003) 1685

DNA methylation

Mammalian epigenomics: reprogramming the genome for development and therapy, 59 (2003) 21

Nuclear reprogramming of cloned embryos produced in vitro, 59 (2003) 33

Dog

Cryopreservation of canine semen using a coconut water extender with egg yolk and three different glycerol concentrations, 59 (2003) 743

Dog semen

Efficacy of the anticaspase agent zVAD-fmk on post-thaw viability of canine spermatozoa, 59 (2003) 1525

Dog spermatozoa

Effects of Equex from different sources on post-thaw survival, longevity and intracellular Ca^{2+} concentration of dog spermatozoa, 59 (2003) 1725

Dogs

Selective control of the estrous cycle of the dog through suppression of estrus and reduction of the length of anestrus, 59 (2003) 1441

Domestic cat

Timing of nuclear maturation of nonstored and stored domestic cat oocytes, 59 (2003) 1567

Donor

Effect of recombinant bovine somatotropin on superovulatory response and recipient pregnancy rates in a commercial embryo transfer program, 59 (2003) 1919

Donor cell

Development of efficient strategies for the production of genetically modified pigs, 59 (2003) 95

eCG

Effects of pregnant mare serum gonadotropin (eCG) on follicle development and granulosa-cell apoptosis in the pig, 59 (2003) 775

Economics

Economics of selecting for sex: the most important genetic trait, 59 (2003) 585

EFS

Vitrification of rat embryos at various developmental stages, 59 (2003) 1851

EGF

Effects of epidermal growth factor on early embryonic development after in vitro fertilization of oocytes collected from ewes treated with follicle stimulating hormone, 59 (2003) 1449

Egg fertility

Impact of consuming tall fescue seeds infected with the endophytic fungus, *Neotyphodium coenophialum*, on reproduction of chickens, 59 (2003) 1313

Egg laying

Impact of consuming tall fescue seeds infected with the endophytic fungus, *Neotyphodium coenophialum*, on reproduction of chickens, 59 (2003) 1313

Ejaculates

Seasonal timing of sperm production in roe deer: interrelationship among changes in ejaculate parameters, morphology and function of testis and accessory glands, 59 (2003) 1487

Embryo

Nuclear reprogramming of cloned embryos produced in vitro, 59 (2003) 33

Buffalo and cattle hybrid embryo development is decreased by caffeine treatment during in vitro fertilization, 59 (2003) 709

New technology for vitrification and field (microscope-free) warming and transfer of small ruminant embryos, 59 (2003) 1209

Growth factors and growth hormone enhance in vitro embryo production and post-thaw survival of vitrified bovine blastocysts, 59 (2003) 1393

Influence of oxygen tension on apoptosis and hatching in bovine embryos cultured in vitro, 59 (2003) 1585

In vitro and in vivo comparison of Ham's F-10, Emcare holding solution and ViGro holding plus for the cooled storage of equine embryos, 59 (2003) 1615

Lack of association of *Mycobacterium avium* subsp. *paratuberculosis* with oocytes and embryos from moderate shedders of the pathogen, 59 (2003) 1651

Cryopreservation of goat oocytes and in vivo derived 2- to 4-cell embryos using the cryoloop

(CLV) and solid-surface vitrification (SSV) methods, 59 (2003) 1839

Effect of recombinant bovine somatotropin on superovulatory response and recipient pregnancy rates in a commercial embryo transfer program, 59 (2003) 1919

Embryo collection

Estrus induction following PGF2α treatment in the superovulated buffalo (*Bubalus bubalis*), 59 (2003) 1203

Embryo development

Effects of thioredoxin on the preimplantation development of bovine embryos, 59 (2003) 863

The effect of vitamins during maturation of caprine oocytes on subsequent developmental potential in vitro, 59 (2003) 1373

Embryo quality

In vitro production of bovine embryos and their application for embryo transfer, 59 (2003) 675

Ovarian response, embryo production and hormonal profile in superovulated goats treated with insulin, 59 (2003) 1459

Effect of reducing sperm concentration during IVF on the ability to distinguish between bulls of high and low field fertility: work in progress, 59 (2003) 1575

Embryo sexing

Use of primers derived from a new sequence of the bovine Y chromosome for sexing *Bos taurus* and *Bos indicus* embryos, 59 (2003) 1415

Embryo stage and quality

Factors affecting the survival of sheep embryos after transfer within a MOET program, 59 (2003) 1265

Embryo survival rate

Factors affecting the survival of sheep embryos after transfer within a MOET program, 59 (2003) 1265

Embryo technologies

Factors affecting commercial application of embryo technologies in New Zealand: a modelling approach, 59 (2003) 617

Factors affecting commercial application of embryo technologies in dairy cattle in Europe—a modelling approach, 59 (2003) 635

Embryo transfer

New commercial opportunities for advanced reproductive technologies in horses, wildlife, and companion animals, 59 (2003) 139

Embryo technologies in the horse, 59 (2003) 151

Current status of embryo technologies in sheep and goat, 59 (2003) 171

In vitro production of bovine embryos and their application for embryo transfer, 59 (2003) 675

Improving successful pregnancies after embryo transfer, 59 (2003) 687

Factors affecting the survival of sheep embryos after transfer within a MOET program, 59 (2003) 1265

Screening of some variables influencing the results of embryo transfer in the ewe. Part II: Two-day-old embryos, 59 (2003) 1345

Vitrification of rat embryos at various developmental stages, 59 (2003) 1851

Embryonic genome activation

Gene expression and chromatin structure in the pre-implantation embryo, 59 (2003) 3

Embryonic germ cell

Serum-free culture of murine primordial germ cells and embryonic germ cells, 59 (2003) 1257

Endophytic fungus

Impact of consuming tall fescue seeds infected with the endophytic fungus, *Neotyphodium coenophialum*, on reproduction of chickens, 59 (2003) 1313

Energy balance

Postpartum reproductive function: association with energy, metabolic and endocrine status in high yielding dairy cows, 59 (2003) 1707

Epididymal storage conditions

In vitro survival of bovine spermatozoa stored at room temperature under epididymal conditions, 59 (2003) 1093

Epididymis

Recovery and cryopreservation of sika deer (*Cervus nippon*) spermatozoa from epididymides stored at 4 °C, 59 (2003) 813

Ultrasonographic appearance of clinically healthy testicles and epididymides of rams, 59 (2003) 1959

Epigenomics

Mammalian epigenomics: reprogramming the genome for development and therapy, 59 (2003) 21

Equex Pasta
Effects of Equex from different sources on post-thaw survival, longevity and intracellular Ca^{2+} concentration of dog spermatozoa, 59 (2003) 1725

Equex STM Paste
Effects of Equex from different sources on post-thaw survival, longevity and intracellular Ca^{2+} concentration of dog spermatozoa, 59 (2003) 1725

Equine
Effects of dead spermatozoa on motion characteristics and membrane integrity of live spermatozoa in fresh and cooled-stored equine semen, 59 (2003) 735
Pregnancy rates in mares following hysteroscopic or transrectally-guided insemination with low sperm numbers at the utero-tubal papilla, 59 (2003) 1001
Intracytoplasmic sperm injection of bovine oocytes with stallion spermatozoa, 59 (2003) 1143
In vitro and in vivo comparison of Ham's F-10, Emcare holding solution and ViGro holding plus for the cooled storage of equine embryos, 59 (2003) 1615
Membrane changes during different stages of a freeze–thaw protocol for equine semen cryopreservation, 59 (2003) 1693

Estradiol
The effect of intrauterine administration of estradiol on postpartum uterine involution in cattle, 59 (2003) 1357
Endocrine events during the periestrous period and the subsequent estrous cycle in ewes after estrus synchronization, 59 (2003) 1533
Abortifacient and endocrine effects of metergoline in beagle bitches during the second half of gestation, 59 (2003) 1929

Estradiol-17β
Ovarian response, embryo production and hormonal profile in superovulated goats treated with insulin, 59 (2003) 1459

Estrous cycle
Effect of probe location on changes in vaginal electrical impedance during the porcine estrous cycle, 59 (2003) 1325
Secretion patterns of oxytocin and PGF2α-metabolite in response to cervical dilatation in cyclic mares, 59 (2003) 1381

Estrous synchronization
Use of medroxyprogesterone acetate (MAP) in lactating Holstein cows within an Ovsynch protocol: follicular growth and hormonal patterns, 59 (2003) 1787
Fixed-time insemination in peripuberal, lightweight replacement beef heifers after estrus synchronization with PGF2alpha and GnRH, 59 (2003) 1827

Estrus
Estrus induction following PGF2α treatment in the superovulated buffalo (*Bubalus bubalis*), 59 (2003) 1203

Estrus induction
Reproduction in female yaks (*Bos grunniens*) and opportunities for improvement, 59 (2003) 1303

Estrus suppression
Selective control of the estrous cycle of the dog through suppression of estrus and reduction of the length of anestrus, 59 (2003) 1441

European Union
Dairy cattle production in Europe, 59 (2003) 563

Ewe
Effect of local interaction of reactive oxygen species with prostaglandin $F_{2\alpha}$ on the release of progesterone in ovine corpora lutea in vivo, 59 (2003) 1335
Screening of some variables influencing the results of embryo transfer in the ewe. Part II: Two-day-old embryos, 59 (2003) 1345
Endocrine events during the periestrous period and the subsequent estrous cycle in ewes after estrus synchronization, 59 (2003) 1533
Early pregnancy diagnosis in sheep by progesterone and pregnancy-associated glycoprotein tests, 59 (2003) 1941

Expanded blastocyst
Stage-specific effects of the osmolarity of a culture medium on the development of parthenogenetic diploids in the pig, 59 (2003) 719

Extender
Fertility of ram semen frozen in Bioexcell® and used for cervical artificial insemination, 59 (2003) 1157
Influence of extender, temperature, and addition of glycerol on post-thaw sperm parameters in ram semen, 59 (2003) 1241

Farrowing rate
Exogenous prostaglandin $F_2\alpha$ at time of ovulation improves reproductive efficiency in repeat breeder sows, 59 (2003) 1479

Felidae
Gonadotropin exposure, salt storage and storage duration affect penetration of domestic cat oocytes by homologous spermatozoa, 59 (2003) 1503

Fertilisation
In vitro maturation of bovine cumulus–oocyte complexes in undiluted follicular fluid: effect on nuclear maturation, pronucleus formation and embryo development, 59 (2003) 987

Fertility
The association between lameness, ovarian cysts and fertility in lactating dairy cows, 59 (2003) 927
Effects of body condition score and score change on the reproductive performance of dairy cows: a meta-analysis, 59 (2003) 801
Cryopreservation of semen from endangered pheasants: the first step towards a cryobank for endangered avian species, 59 (2003) 875

Fertilization
Effects of gas conditions, time of medium change, and ratio of medium to embryo on in vitro development of horse oocytes fertilized by intracytoplasmic sperm injection, 59 (2003) 1219

Festuca arundinacea
Impact of consuming tall fescue seeds infected with the endophytic fungus, *Neotyphodium coenophialum*, on reproduction of chickens, 59 (2003) 1313

Feulgen stain
Effect of processing and measuring procedures on estimated sizes of bull sperm heads, 59 (2003) 1765

Fibroblast
Studies of the cell cycle of in vitro cultured skin fibroblasts in goats: work in progress, 59 (2003) 1277

Field fertility
Effect of reducing sperm concentration during IVF on the ability to distinguish between bulls of high and low field fertility: work in progress, 59 (2003) 1575

First cleavage stage
Effects of thioredoxin on the preimplantation development of bovine embryos, 59 (2003) 863

First lactation cows
Metabolic profiles and progesterone cycles in first lactation dairy cows, 59 (2003) 1661

First ovulation
Postpartum reproductive function: association with energy, metabolic and endocrine status in high yielding dairy cows, 59 (2003) 1707

Fixation methods
Effect of processing and measuring procedures on estimated sizes of bull sperm heads, 59 (2003) 1765

Flow cytometry
Changes in the distribution of lectin receptors during capacitation and acrosome reaction in boar spermatozoa, 59 (2003) 1171
Birth of piglets after deep intrauterine insemination with flow cytometrically sorted boar spermatozoa, 59 (2003) 1605

Fluorescence staining
Efficacy of the anticaspase agent zVAD-fmk on post-thaw viability of canine spermatozoa, 59 (2003) 1525

Flushing media
Presence of caprine arthritis–encephalitis virus (CAEV) proviral DNA in genital tract tissues of superovulated dairy goat does, 59 (2003) 1515

Follicle
Effect of ovary storage and oocyte transport method on maturation rate of horse oocytes, 59 (2003) 765
Effects of pregnant mare serum gonadotropin (eCG) on follicle development and granulosa-cell apoptosis in the pig, 59 (2003) 775
Association of uterine edema with follicle waves around the onset of the breeding season in pony mares, 59 (2003) 1181

Follicle deviation
Calculated follicle deviation using segmented regression for modeling diameter differences in cattle, 59 (2003) 1811

Follicle selection
Calculated follicle deviation using segmented regression for modeling diameter differences in cattle, 59 (2003) 1811

Folliculocentesis

Production of transgenic goats by pronuclear microinjection of in vitro produced zygotes derived from oocytes recovered by laparoscopy, 59 (2003) 831

Freezing

Recovery and cryopreservation of sika deer (*Cervus nippon*) spermatozoa from epididymides stored at 4 °C, 59 (2003) 813

Quality of canine semen submitted to single or fractionated glycerol addition during the freezing process, 59 (2003) 821

Frozen semen

Artificial insemination: the state of the art, 59 (2003) 571

FSH

Effects of epidermal growth factor on early embryonic development after in vitro fertilization of oocytes collected from ewes treated with follicle stimulating hormone, 59 (2003) 1449

Effect of follicle-stimulating hormone on nuclear and cytoplasmic maturation of sow oocytes in vitro, 59 (2003) 2017

Gamete intrafallopian tube transfer (GIFT)

Embryo technologies in the horse, 59 (2003) 151

Ganders

Evaluation of fresh and frozen-thawed semen of individual ganders by assessment of spermatozoa motility and morphology, 59 (2003) 1627

Gene preservation

Rabbit and pig ear skin sample cryobanking: effects of storage time and temperature of the whole ear extirpated immediately after death, 59 (2003) 1469

Genetic gain

Factors affecting commercial application of embryo technologies in dairy cattle in Europe—a modelling approach, 59 (2003) 635

Gestation

Pregnancy-associated glycoprotein concentrations during pregnancy and the postpartum period in Azawak Zebu cattle, 59 (2003) 1131

GH

Growth factors and growth hormone enhance in vitro embryo production and post-thaw survival of vitrified bovine blastocysts, 59 (2003) 1393

GnRH

Use of medroxyprogesterone acetate (MAP) in lactating Holstein cows within an Ovsynch protocol: follicular growth and hormonal patterns, 59 (2003) 1787

The effects of GnRH administration postinsemination on serum concentrations of progesterone and pregnancy rates in dairy cattle exposed to mild summer heat stress, 59 (2003) 1799

Effect of pretreatment with bovine somatotropin (bST) and/or gonadotropin-releasing hormone (GnRH) on conception rate of dairy cows with ovarian cysts subjected to synchronization of ovulation and timed insemination, 59 (2003) 1991

GnRH agonist

Factors affecting the survival of sheep embryos after transfer within a MOET program, 59 (2003) 1265

Goat

Current status of embryo technologies in sheep and goat, 59 (2003) 171

Studies of the cell cycle of in vitro cultured skin fibroblasts in goats: work in progress, 59 (2003) 1277

The effect of vitamins during maturation of caprine oocytes on subsequent developmental potential in vitro, 59 (2003) 1373

Ovarian response, embryo production and hormonal profile in superovulated goats treated with insulin, 59 (2003) 1459

Presence of caprine arthritis–encephalitis virus (CAEV) proviral DNA in genital tract tissues of superovulated dairy goat does, 59 (2003) 1515

Cryopreservation of goat oocytes and in vivo derived 2- to 4-cell embryos using the cryoloop (CLV) and solid-surface vitrification (SSV) methods, 59 (2003) 1839

Granulosa cells

Effects of pregnant mare serum gonadotropin (eCG) on follicle development and granulosa-cell apoptosis in the pig, 59 (2003) 775

Growing stage oocytes

Development of bovine oocytes reconstructed with a nucleus from growing stage oocytes after fertilization in vitro, 59 (2003) 1231

Growth factors

Growth factors and growth hormone enhance in vitro embryo production and post-thaw survival of vitrified bovine blastocysts, 59 (2003) 1393

Guinea fowl
Excess nuclear DNA in spermatozoa of guinea fowl, 59 (2003) 1685

HASAC
Health and Safety Advisory Committee (HASAC) of the International Embryo Transfer Society (IETS) has managed critical challenges for two decades, 59 (2003) 1067

Heat stress
The effects of GnRH administration postinsemination on serum concentrations of progesterone and pregnancy rates in dairy cattle exposed to mild summer heat stress, 59 (2003) 1799

Heparin
Buffalo and cattle hybrid embryo development is decreased by caffeine treatment during in vitro fertilization, 59 (2003) 709

H_2O_2
Effect of local interaction of reactive oxygen species with prostaglandin $F_{2\alpha}$ on the release of progesterone in ovine corpora lutea in vivo, 59 (2003) 1335

Horse
Effect of ovary storage and oocyte transport method on maturation rate of horse oocytes, 59 (2003) 765
Activity of angiotensin-converting enzyme (ACE) in reproductive tissues of the stallion and effects of angiotensin II on sperm motility, 59 (2003) 901
Effects of gas conditions, time of medium change, and ratio of medium to embryo on in vitro development of horse oocytes fertilized by intracytoplasmic sperm injection, 59 (2003) 1219
A sporadic case of the sex-reversed mare (64,XY; SRY-negative): molecular and cytogenetic studies of the Y chromosome, 59 (2003) 1597

Hybrid
Buffalo and cattle hybrid embryo development is decreased by caffeine treatment during in vitro fertilization, 59 (2003) 709

Hysteroscopy
Pregnancy rates in mares following hysteroscopic or transrectally-guided insemination with low sperm numbers at the utero-tubal papilla, 59 (2003) 1001

ICSI
Development of efficient strategies for the production of genetically modified pigs, 59 (2003) 95
Production of piglets using intracytoplasmic sperm injection (ICSI) with flowcytometrically sorted boar semen and artificially activated oocytes, 59 (2003) 961

IETS
Health and Safety Advisory Committee (HASAC) of the International Embryo Transfer Society (IETS) has managed critical challenges for two decades, 59 (2003) 1067

IGF-I
Somatic cell nuclear transfer in domestic cat oocytes treated with IGF-I for in vitro maturation, 59 (2003) 1775

Immunoglobulin
Artificial chromosome vectors and expression of complex proteins in transgenic animals, 59 (2003) 107

Impedance
Effect of probe location on changes in vaginal electrical impedance during the porcine estrous cycle, 59 (2003) 1325

Imprinting
Development of bovine oocytes reconstructed with a nucleus from growing stage oocytes after fertilization in vitro, 59 (2003) 1231

In vitro
Bovine embryo technologies, 59 (2003) 599
Apoptosis within bovine follicular cells and its effect on oocyte development during in vitro maturation, 59 (2003) 1421

In vitro culture
Bringing up small oocytes to eggs in pigs and cows, 59 (2003) 61

In vitro embryo production
New developments reproductive technologies in deer, 59 (2003) 189
Bovine and buffalo in vitro embryo production using oocytes derived from abattoir ovaries or collected by transvaginal follicle aspiration, 59 (2003) 1123

In vitro fertilization
Commercialization of animal biotechnology, 59 (2003) 125
Current status of embryo technologies in sheep and goat, 59 (2003) 171

In vitro maturation

Improved collection and developmental competence of immature macaque oocytes, 59 (2003) 699

FSH priming improves oocyte maturation, but priming with FSH or hCG has no effect on subsequent embryonic development in an in vitro maturation program, 59 (2003) 1741

Somatic cell nuclear transfer in domestic cat oocytes treated with IGF-I for in vitro maturation, 59 (2003) 1775

In vitro produced embryo

In vitro production of bovine embryos and their application for embryo transfer, 59 (2003) 675

Use of two replacements of serum during bovine embryo culture in vitro, 59 (2003) 889

Inbreeding

Factors affecting commercial application of embryo technologies in dairy cattle in Europe—a modelling approach, 59 (2003) 635

Inheritance

Mammalian epigenomics: reprogramming the genome for development and therapy, 59 (2003) 21

Insemination

Pregnancy rates in mares following hysteroscopic or transrectally-guided insemination with low sperm numbers at the utero-tubal papilla, 59 (2003) 1001

Insulin

Ovarian response, embryo production and hormonal profile in superovulated goats treated with insulin, 59 (2003) 1459

Insulin-like growth factor-I

Metabolic profiles and progesterone cycles in first lactation dairy cows, 59 (2003) 1661

Intracytoplasmic sperm injection (ICSI)

Embryo technologies in the horse, 59 (2003) 151

Effects of gas conditions, time of medium change, and ratio of medium to embryo on in vitro development of horse oocytes fertilized by intracytoplasmic sperm injection, 59 (2003) 1219

Intracytoplasmic sperm injection of bovine oocytes with stallion spermatozoa, 59 (2003) 1143

IVF

Effects of oviductal and cumulus cells on in vitro fertilization and embryo development of porcine oocytes fertilized with epididymal spermatozoa, 59 (2003) 975

Effects of epidermal growth factor on early embryonic development after in vitro fertilization of oocytes collected from ewes treated with follicle stimulating hormone, 59 (2003) 1449

Effect of reducing sperm concentration during IVF on the ability to distinguish between bulls of high and low field fertility: work in progress, 59 (2003) 1575

Effect of leukemia inhibitory factor on bovine embryos produced in vitro under chemically defined conditions, 59 (2003) 1751

Effect of leukemia inhibitory factor on bovine embryos produced in vitro under chemically defined conditions, 59 (2003) 1827

IVM

Effect of follicle-stimulating hormone on nuclear and cytoplasmic maturation of sow oocytes in vitro, 59 (2003) 2017

IVM media

Effect of maturation media and oocytes derived from sows or gilts on the development of cloned pig embryos, 59 (2003) 1641

IVP

Bovine embryo technologies, 59 (2003) 599

Karyoplast type

Improvement of a porcine somatic cell nuclear transfer technique by optimizing donor cell and recipient oocyte preparations, 59 (2003) 1949

Lactating dairy cows

Effect of pretreatment with bovine somatotropin (bST) and/or gonadotropin-releasing hormone (GnRH) on conception rate of dairy cows with ovarian cysts subjected to synchronization of ovulation and timed insemination, 59 (2003) 1991

Lambs

Behavioural development in the neonatal lamb: effect of maternal and birth-related factors, 59 (2003) 1027

Lameness

The association between lameness, ovarian cysts and fertility in lactating dairy cows, 59 (2003) 927

Lectin

Changes in the distribution of lectin receptors during capacitation and acrosome reaction in boar spermatozoa, 59 (2003) 1171

LIF
Effect of leukemia inhibitory factor on bovine embryos produced in vitro under chemically defined conditions, 59 (2003) 1751
Effect of leukemia inhibitory factor on bovine embryos produced in vitro under chemically defined conditions, 59 (2003) 1827

Linear transducer
Efficacy of linear and convex transducers for ultrasound-guided transvaginal follicle aspiration, 59 (2003) 1435

Lipid
Reproductive period affects lipid composition and quality of fresh and stored spermatozoa in Turkeys, 59 (2003) 753

Liquid semen
Artificial insemination: the state of the art, 59 (2003) 571
Effect of sperm coating on the survival and penetrating ability of in vitro stored bovine spermatozoa, 59 (2003) 1109

Litter size
Exogenous prostaglandin $F_2\alpha$ at time of ovulation improves reproductive efficiency in repeat breeder sows, 59 (2003) 1479

Luteinizing hormone
Endocrine events during the periestrous period and the subsequent estrous cycle in ewes after estrus synchronization, 59 (2003) 1533

Luteolysis
Estrus induction following PGF2α treatment in the superovulated buffalo (*Bubalus bubalis*), 59 (2003) 1203
Effect of local interaction of reactive oxygen species with prostaglandin $F_{2\alpha}$ on the release of progesterone in ovine corpora lutea in vivo, 59 (2003) 1335

Lymphocytes
Lymphocyte-mediated lysis of sheep chorion: susceptibility of chorionic cells to third-party and maternal cytotoxic lymphocytes and presence of cells in the endometrium exhibiting cytotoxicity toward natural-killer cell targets, 59 (2003) 787

Macaca mulatta
Improved collection and developmental competence of immature macaque oocytes, 59 (2003) 699

Male
Effects of different sexual stimuli on oxytocin release, uterine activity and receptive behavior in estrous sows, 59 (2003) 849

Male-specific DNA sequences
Male-specific DNA sequences in pigs, 59 (2003) 841

Mammalian epigenetics
Mammalian epigenomics: reprogramming the genome for development and therapy, 59 (2003) 21

Manual removal
Comparison of two protocols for the treatment of retained fetal membranes in dairy cattle, 59 (2003) 951

Mare
Association of uterine edema with follicle waves around the onset of the breeding season in pony mares, 59 (2003) 1181
Secretion patterns of oxytocin and PGF2α-metabolite in response to cervical dilatation in cyclic mares, 59 (2003) 1381

Mare 64,XY
A sporadic case of the sex-reversed mare (64,XY; SRY-negative): molecular and cytogenetic studies of the Y chromosome, 59 (2003) 1597

Maturation
Factors affecting oocyte quality and quantity in commercial application of embryo technologies in the cattle breeding industry, 59 (2003) 651
Effect of ovary storage and oocyte transport method on maturation rate of horse oocytes, 59 (2003) 765
Enucleolation of porcine oocytes, 59 (2003) 1879

Medroxyprogesterone acetate
Use of medroxyprogesterone acetate (MAP) in lactating Holstein cows within an Ovsynch protocol: follicular growth and hormonal patterns, 59 (2003) 1787

Membrane integrity
Effects of dead spermatozoa on motion characteristics and membrane integrity of live spermatozoa in fresh and cooled-stored equine semen, 59 (2003) 735

Meta-analysis
Effects of body condition score and score change on the reproductive performance of dairy cows: a meta-analysis, 59 (2003) 801

Metabolic status
Postpartum reproductive function: association with energy, metabolic and endocrine status in high yielding dairy cows, 59 (2003) 1707

Metergoline
Abortifacient and endocrine effects of metergoline in beagle bitches during the second half of gestation, 59 (2003) 1929

Methanol
Effects of methanol and developmental arrest on chilling injury in zebrafish (*Danio rerio*) embryos, 59 (2003) 1545

Microinjection
Production of transgenic goats by pronuclear microinjection of in vitro produced zygotes derived from oocytes recovered by laparoscopy, 59 (2003) 831

Microinsemination
New microinsemination techniques for laboratory animals, 59 (2003) 87

MII
In vitro maturation of bovine cumulus–oocyte complexes in undiluted follicular fluid: effect on nuclear maturation, pronucleus formation and embryo development, 59 (2003) 987

Milk–egg yolk
Fertility of ram semen frozen in Bioexcell® and used for cervical artificial insemination, 59 (2003) 1157

Modelling
Factors affecting commercial application of embryo technologies in New Zealand: a modelling approach, 59 (2003) 617

MOET
Bovine embryo technologies, 59 (2003) 599
Factors affecting oocyte quality and quantity in commercial application of embryo technologies in the cattle breeding industry, 59 (2003) 651

Monozygotic
Semen characteristics of genetically identical quadruplet bulls, 59 (2003) 1865

Motility
Effects of dead spermatozoa on motion characteristics and membrane integrity of live spermatozoa in fresh and cooled-stored equine semen, 59 (2003) 735

Motility pattern
Identification of sperm subpopulations with specific motility characteristics in stallion ejaculates, 59 (2003) 1973

Mouse
Serum-free culture of murine primordial germ cells and embryonic germ cells, 59 (2003) 1257
FSH priming improves oocyte maturation, but priming with FSH or hCG has no effect on subsequent embryonic development in an in vitro maturation program, 59 (2003) 1741

***N*-Acetyl cysteine**
Antioxidant requirements for bovine oocytes varies during in vitro maturation, fertilization and development, 59 (2003) 939

Neonate
Behavioural development in the neonatal lamb: effect of maternal and birth-related factors, 59 (2003) 1027

Neotyphodium coenophialum
Impact of consuming tall fescue seeds infected with the endophytic fungus, *Neotyphodium coenophialum*, on reproduction of chickens, 59 (2003) 1313

Neuropeptides
Innervation of vas deferens and accessory male genital glands in the water buffalo (*Bubalus bubalis*). Neurochemical characteristics and relationships to the reproductive activity, 59 (2003) 1999

Nonruminants
Double radial immunodiffusion as a tool to identify pregnancy-associated glycoproteins in ruminant and nonruminant placentae, 59 (2003) 1291

Normal
Ultrasonographic appearance of clinically healthy testicles and epididymides of rams, 59 (2003) 1959

NOS
Innervation of vas deferens and accessory male genital glands in the water buffalo (*Bubalus bubalis*). Neurochemical characteristics and relationships to the reproductive activity, 59 (2003) 1999

Nuclear maturation

In vitro maturation of bovine cumulus–oocyte complexes in undiluted follicular fluid: effect on nuclear maturation, pronucleus formation and embryo development, 59 (2003) 987

Nuclear transfer

Coordination between donor cell type and cell cycle stage improves nuclear cloning efficiency in cattle, 59 (2003) 45

Development of efficient strategies for the production of genetically modified pigs, 59 (2003) 95

Transgenic swine for biomedicine and agriculture, 59 (2003) 115

Development of bovine oocytes reconstructed with a nucleus from growing stage oocytes after fertilization in vitro, 59 (2003) 1231

Effect of maturation media and oocytes derived from sows or gilts on the development of cloned pig embryos, 59 (2003) 1641

Somatic cell nuclear transfer in domestic cat oocytes treated with IGF-I for in vitro maturation, 59 (2003) 1775

Nucleolus

Enucleolation of porcine oocytes, 59 (2003) 1879

Nutrition

Reproduction in female yaks (*Bos grunniens*) and opportunities for improvement, 59 (2003) 1303

OIE

Health and Safety Advisory Committee (HASAC) of the International Embryo Transfer Society (IETS) has managed critical challenges for two decades, 59 (2003) 1067

Olomoucine

Studies of the cell cycle of in vitro cultured skin fibroblasts in goats: work in progress, 59 (2003) 1277

Oocyte

Factors affecting oocyte quality and quantity in commercial application of embryo technologies in the cattle breeding industry, 59 (2003) 651

Effect of ovary storage and oocyte transport method on maturation rate of horse oocytes, 59 (2003) 765

Effects of oviductal and cumulus cells on in vitro fertilization and embryo development of porcine oocytes fertilized with epididymal spermatozoa, 59 (2003) 975

Intracytoplasmic sperm injection of bovine oocytes with stallion spermatozoa, 59 (2003) 1143

Effects of gas conditions, time of medium change, and ratio of medium to embryo on in vitro development of horse oocytes fertilized by intracytoplasmic sperm injection, 59 (2003) 1219

Somatic cell nuclear transfer in domestic cat oocytes treated with IGF-I for in vitro maturation, 59 (2003) 1775

Cryopreservation of goat oocytes and in vivo derived 2- to 4-cell embryos using the cryoloop (CLV) and solid-surface vitrification (SSV) methods, 59 (2003) 1839

Enucleolation of porcine oocytes, 59 (2003) 1879

Oocyte activation

Production of piglets using intracytoplasmic sperm injection (ICSI) with flowcytometrically sorted boar semen and artificially activated oocytes, 59 (2003) 961

Oocyte growth

Bringing up small oocytes to eggs in pigs and cows, 59 (2003) 61

Oocyte maturation

The effect of vitamins during maturation of caprine oocytes on subsequent developmental potential in vitro, 59 (2003) 1373

Apoptosis within bovine follicular cells and its effect on oocyte development during in vitro maturation, 59 (2003) 1421

Oocyte source

Effect of maturation media and oocytes derived from sows or gilts on the development of cloned pig embryos, 59 (2003) 1641

Improvement of a porcine somatic cell nuclear transfer technique by optimizing donor cell and recipient oocyte preparations, 59 (2003) 1949

Oocytes

Efficacy of linear and convex transducers for ultrasound-guided transvaginal follicle aspiration, 59 (2003) 1435

Effect of follicle-stimulating hormone on nuclear and cytoplasmic maturation of sow oocytes in vitro, 59 (2003) 2017

OPU-IVP

Factors affecting oocyte quality and quantity in commercial application of embryo technologies in the cattle breeding industry, 59 (2003) 651

Ovarian cysts
The association between lameness, ovarian cysts and fertility in lactating dairy cows, 59 (2003) 927
Effect of pretreatment with bovine somatotropin (bST) and/or gonadotropin-releasing hormone (GnRH) on conception rate of dairy cows with ovarian cysts subjected to synchronization of ovulation and timed insemination, 59 (2003) 1991

Ovarian dysfunction
Studies of the pathogenesis of bovine pestivirus-induced ovarian dysfunction in superovulated dairy cattle, 59 (2003) 1051

Ovarian function
Metabolic profiles and progesterone cycles in first lactation dairy cows, 59 (2003) 1661

Ovarian response
Ovarian response, embryo production and hormonal profile in superovulated goats treated with insulin, 59 (2003) 1459

Ovary
Bringing up small oocytes to eggs in pigs and cows, 59 (2003) 61
Effect of ovary storage and oocyte transport method on maturation rate of horse oocytes, 59 (2003) 765
Components of litter size in gilts with different prolactin receptor genotypes, 59 (2003) 915
The effect of intrauterine administration of estradiol on postpartum uterine involution in cattle, 59 (2003) 1357

Oviduct
Presence of caprine arthritis–encephalitis virus (CAEV) proviral DNA in genital tract tissues of superovulated dairy goat does, 59 (2003) 1515

Oviductal cells
Effects of oviductal and cumulus cells on in vitro fertilization and embryo development of porcine oocytes fertilized with epididymal spermatozoa, 59 (2003) 975
The effect of oviductal epithelial cell co-culture during in vitro maturation on sow oocyte morphology, fertilization and embryo development, 59 (2003) 1889

Oviductal papilla
Pregnancy rates in mares following hysteroscopic or transrectally-guided insemination with low sperm numbers at the utero-tubal papilla, 59 (2003) 1001

Ovine
Lymphocyte-mediated lysis of sheep chorion: susceptibility of chorionic cells to third-party and maternal cytotoxic lymphocytes and presence of cells in the endometrium exhibiting cytotoxicity toward natural-killer cell targets, 59 (2003) 787

Ovsynch protocol
Effect of pretreatment with bovine somatotropin (bST) and/or gonadotropin-releasing hormone (GnRH) on conception rate of dairy cows with ovarian cysts subjected to synchronization of ovulation and timed insemination, 59 (2003) 1991

Ovum pick-up
Production of transgenic goats by pronuclear microinjection of in vitro produced zygotes derived from oocytes recovered by laparoscopy, 59 (2003) 831
Bovine and buffalo in vitro embryo production using oocytes derived from abattoir ovaries or collected by transvaginal follicle aspiration, 59 (2003) 1123

Oxygen
Influence of oxygen tension on apoptosis and hatching in bovine embryos cultured in vitro, 59 (2003) 1585

Oxytocin
Effects of different sexual stimuli on oxytocin release, uterine activity and receptive behavior in estrous sows, 59 (2003) 849
Secretion patterns of oxytocin and PGF2α-metabolite in response to cervical dilatation in cyclic mares, 59 (2003) 1381
Effects of oxytocin on semen release response in African catfish (*Clarias gariepinus*), 59 (2003) 1905

P4
Early pregnancy diagnosis in sheep by progesterone and pregnancy-associated glycoprotein tests, 59 (2003) 1941

PAG
Pregnancy-associated glycoprotein concentrations during pregnancy and the postpartum period in Azawak Zebu cattle, 59 (2003) 1131
Double radial immunodiffusion as a tool to identify pregnancy-associated glycoproteins in ruminant and nonruminant placentae, 59 (2003) 1291
Early pregnancy diagnosis in sheep by progesterone and pregnancy-associated glycoprotein tests, 59 (2003) 1941

Paratuberculosis
Lack of association of *Mycobacterium avium* subsp. *paratuberculosis* with oocytes and embryos from moderate shedders of the pathogen, 59 (2003) 1651

Parity
Effect of probe location on changes in vaginal electrical impedance during the porcine estrous cycle, 59 (2003) 1325

Parthenogenetic activation
Improvement of a porcine somatic cell nuclear transfer technique by optimizing donor cell and recipient oocyte preparations, 59 (2003) 1949

Pasture-based
Pasture-based dairying: challenges and rewards for New Zealand producers, 59 (2003) 553

PCR
Male-specific DNA sequences in pigs, 59 (2003) 841
Use of primers derived from a new sequence of the bovine Y chromosome for sexing *Bos taurus* and *Bos indicus* embryos, 59 (2003) 1415

Pelvic ganglia
Innervation of vas deferens and accessory male genital glands in the water buffalo (*Bubalus bubalis*). Neurochemical characteristics and relationships to the reproductive activity, 59 (2003) 1999

Penetration rate
Effect of sperm coating on the survival and penetrating ability of in vitro stored bovine spermatozoa, 59 (2003) 1109

Periestrus period
Endocrine events during the periestrous period and the subsequent estrous cycle in ewes after estrus synchronization, 59 (2003) 1533

Peroxidation
Reproductive period affects lipid composition and quality of fresh and stored spermatozoa in Turkeys, 59 (2003) 753

PGF2α-metabolite
Secretion patterns of oxytocin and PGF2α-metabolite in response to cervical dilatation in cyclic mares, 59 (2003) 1381

pH
Cryopreservation of semen from endangered pheasants: the first step towards a cryobank for endangered avian species, 59 (2003) 875

Pheromones
Effects of different sexual stimuli on oxytocin release, uterine activity and receptive behavior in estrous sows, 59 (2003) 849

Phosphotyrosine
Purification and characterization of a protein tyrosine acid phosphatase from boar seminal vesicle glands, 59 (2003) 1011

Pig
Effects of pregnant mare serum gonadotropin (eCG) on follicle development and granulosa-cell apoptosis in the pig, 59 (2003) 775
Male-specific DNA sequences in pigs, 59 (2003) 841
Components of litter size in gilts with different prolactin receptor genotypes, 59 (2003) 915
Production of piglets using intracytoplasmic sperm injection (ICSI) with flowcytometrically sorted boar semen and artificially activated oocytes, 59 (2003) 961
Effects of oviductal and cumulus cells on in vitro fertilization and embryo development of porcine oocytes fertilized with epididymal spermatozoa, 59 (2003) 975
Birth of piglets after deep intrauterine insemination with flow cytometrically sorted boar spermatozoa, 59 (2003) 1605

Piglets
Production of piglets using intracytoplasmic sperm injection (ICSI) with flowcytometrically sorted boar semen and artificially activated oocytes, 59 (2003) 961

Pituitary extract
Effects of oxytocin on semen release response in African catfish (*Clarias gariepinus*), 59 (2003) 1905

Placenta
Components of litter size in gilts with different prolactin receptor genotypes, 59 (2003) 915
Double radial immunodiffusion as a tool to identify pregnancy-associated glycoproteins in ruminant and nonruminant placentae, 59 (2003) 1291

Porcine
Production of piglets using intracytoplasmic sperm injection (ICSI) with flowcytometrically

sorted boar semen and artificially activated oocytes, 59 (2003) 961

Effect of maturation media and oocytes derived from sows or gilts on the development of cloned pig embryos, 59 (2003) 1641

The effect of oviductal epithelial cell co-culture during in vitro maturation on sow oocyte morphology, fertilization and embryo development, 59 (2003) 1889

Improvement of a porcine somatic cell nuclear transfer technique by optimizing donor cell and recipient oocyte preparations, 59 (2003) 1949

Porcine parthenogenesis

Stage-specific effects of the osmolarity of a culture medium on the development of parthenogenetic diploids in the pig, 59 (2003) 719

Postgenomics

Mammalian epigenomics: reprogramming the genome for development and therapy, 59 (2003) 21

Post-mortem recovery

Rabbit and pig ear skin sample cryobanking: effects of storage time and temperature of the whole ear extirpated immediately after death, 59 (2003) 1469

Postpartum

Pregnancy-associated glycoprotein concentrations during pregnancy and the postpartum period in Azawak Zebu cattle, 59 (2003) 1131

The effect of intrauterine administration of estradiol on postpartum uterine involution in cattle, 59 (2003) 1357

Post-thaw

Influence of extender, temperature, and addition of glycerol on post-thaw sperm parameters in ram semen, 59 (2003) 1241

Poultry reproduction

Impact of consuming tall fescue seeds infected with the endophytic fungus, *Neotyphodium coenophialum*, on reproduction of chickens, 59 (2003) 1313

Pregnancy diagnosis

Early pregnancy diagnosis in sheep by progesterone and pregnancy-associated glycoprotein tests, 59 (2003) 1941

Pregnancy rate

Improving successful pregnancies after embryo transfer, 59 (2003) 687

Pre-implantation embryos

Gene expression and chromatin structure in the pre-implantation embryo, 59 (2003) 3

Priming

FSH priming improves oocyte maturation, but priming with FSH or hCG has no effect on subsequent embryonic development in an in vitro maturation program, 59 (2003) 1741

Primordial germ cell

Serum-free culture of murine primordial germ cells and embryonic germ cells, 59 (2003) 1257

Probe location

Effect of probe location on changes in vaginal electrical impedance during the porcine estrous cycle, 59 (2003) 1325

Progesterone

Secretion patterns of oxytocin and PGF2α-metabolite in response to cervical dilatation in cyclic mares, 59 (2003) 1381

Ovarian response, embryo production and hormonal profile in superovulated goats treated with insulin, 59 (2003) 1459

Endocrine events during the periestrous period and the subsequent estrous cycle in ewes after estrus synchronization, 59 (2003) 1533

The effects of GnRH administration postinsemination on serum concentrations of progesterone and pregnancy rates in dairy cattle exposed to mild summer heat stress, 59 (2003) 1799

Abortifacient and endocrine effects of metergoline in beagle bitches during the second half of gestation, 59 (2003) 1929

Progesterone profile

Metabolic profiles and progesterone cycles in first lactation dairy cows, 59 (2003) 1661

Prolactin receptor gene

Components of litter size in gilts with different prolactin receptor genotypes, 59 (2003) 915

Prostaglandin

Exogenous prostaglandin $F_2\alpha$ at time of ovulation improves reproductive efficiency in repeat breeder sows, 59 (2003) 1479

Use of medroxyprogesterone acetate (MAP) in lactating Holstein cows within an Ovsynch protocol: follicular growth and hormonal patterns, 59 (2003) 1787

Prostaglandin E_2

Pregnancy rates in mares following hysteroscopic or transrectally-guided insemination with low sperm numbers at the utero-tubal papilla, 59 (2003) 1001

Prostate

Innervation of vas deferens and accessory male genital glands in the water buffalo (*Bubalus bubalis*). Neurochemical characteristics and relationships to the reproductive activity, 59 (2003) 1999

Puberty

Serum thyroid hormones and reproductive characteristics of Rambouillet ewe lambs treated with propylthiouracil before puberty, 59 (2003) 1403

Radial immunodiffusion

Double radial immunodiffusion as a tool to identify pregnancy-associated glycoproteins in ruminant and nonruminant placentae, 59 (2003) 1291

Ram

Influence of extender, temperature, and addition of glycerol on post-thaw sperm parameters in ram semen, 59 (2003) 1241

RAPD-PCR

Male-specific DNA sequences in pigs, 59 (2003) 841

Rat

Vitrification of rat embryos at various developmental stages, 59 (2003) 1851

rbST

Effect of recombinant bovine somatotropin on superovulatory response and recipient pregnancy rates in a commercial embryo transfer program, 59 (2003) 1919

Recipient

Effect of recombinant bovine somatotropin on superovulatory response and recipient pregnancy rates in a commercial embryo transfer program, 59 (2003) 1919

Recipient ewe age

Factors affecting the survival of sheep embryos after transfer within a MOET program, 59 (2003) 1265

Reconstructed embryos

Improvement of a porcine somatic cell nuclear transfer technique by optimizing donor cell and recipient oocyte preparations, 59 (2003) 1949

Refrigeration

Recovery and cryopreservation of sika deer (*Cervus nippon*) spermatozoa from epididymides stored at 4 °C, 59 (2003) 813

In vitro and in vivo comparison of Ham's F-10, Emcare holding solution and ViGro holding plus for the cooled storage of equine embryos, 59 (2003) 1615

Renin–angiotensin system

Activity of angiotensin-converting enzyme (ACE) in reproductive tissues of the stallion and effects of angiotensin II on sperm motility, 59 (2003) 901

Reproduction

Quality of canine semen submitted to single or fractionated glycerol addition during the freezing process, 59 (2003) 821

Reproduction in female yaks (*Bos grunniens*) and opportunities for improvement, 59 (2003) 1303

Serum thyroid hormones and reproductive characteristics of Rambouillet ewe lambs treated with propylthiouracil before puberty, 59 (2003) 1403

Use of medroxyprogesterone acetate (MAP) in lactating Holstein cows within an Ovsynch protocol: follicular growth and hormonal patterns, 59 (2003) 1787

Reproductive biotechnology

New commercial opportunities for advanced reproductive technologies in horses, wildlife, and companion animals, 59 (2003) 139

Reproductive performance

Comparison of two protocols for the treatment of retained fetal membranes in dairy cattle, 59 (2003) 951

Reproductive technologies

Pasture-based dairying: challenges and rewards for New Zealand producers, 59 (2003) 553

Reproductive tract scores

Repeatability and accuracy of reproductive tract scoring to determine pubertal status in beef heifers, 59 (2003) 1087

Reprogramming
Nuclear reprogramming of cloned embryos produced in vitro, 59 (2003) 33

Retained fetal membranes
Comparison of two protocols for the treatment of retained fetal membranes in dairy cattle, 59 (2003) 951

RIA
Pregnancy-associated glycoprotein concentrations during pregnancy and the postpartum period in Azawak Zebu cattle, 59 (2003) 1131

Roe deer
Seasonal timing of sperm production in roe deer: interrelationship among changes in ejaculate parameters, morphology and function of testis and accessory glands, 59 (2003) 1487

Ruminants
Double radial immunodiffusion as a tool to identify pregnancy-associated glycoproteins in ruminant and nonruminant placentae, 59 (2003) 1291

Season
Seasonal timing of sperm production in roe deer: interrelationship among changes in ejaculate parameters, morphology and function of testis and accessory glands, 59 (2003) 1487

Segmented regression
Calculated follicle deviation using segmented regression for modeling diameter differences in cattle, 59 (2003) 1811

Semen
Cryopreservation of canine semen using a coconut water extender with egg yolk and three different glycerol concentrations, 59 (2003) 743
Quality of canine semen submitted to single or fractionated glycerol addition during the freezing process, 59 (2003) 821
Cryopreservation of semen from endangered pheasants: the first step towards a cryobank for endangered avian species, 59 (2003) 875
Influence of extender, temperature, and addition of glycerol on post-thaw sperm parameters in ram semen, 59 (2003) 1241

Semen preservation
Effects of dead spermatozoa on motion characteristics and membrane integrity of live spermatozoa in fresh and cooled-stored equine semen, 59 (2003) 735

Semen release
Effects of oxytocin on semen release response in African catfish (*Clarias gariepinus*), 59 (2003) 1905

Seminal vesicles
Purification and characterization of a protein tyrosine acid phosphatase from boar seminal vesicle glands, 59 (2003) 1011

Sephadex ion-exchange
Sephadex and sephadex ion-exchange filtration improves the quality and freezability of low-grade buffalo semen ejaculates, 59 (2003) 1189

Serum
Use of two replacements of serum during bovine embryo culture in vitro, 59 (2003) 889

Serum replacement
Use of two replacements of serum during bovine embryo culture in vitro, 59 (2003) 889

Serum starvation
Studies of the cell cycle of in vitro cultured skin fibroblasts in goats: work in progress, 59 (2003) 1277

Serum-free culture
Serum-free culture of murine primordial germ cells and embryonic germ cells, 59 (2003) 1257

Serum-free medium
In vitro production of bovine embryos and their application for embryo transfer, 59 (2003) 675

Severe combined immune deficiency mouse
Bringing up small oocytes to eggs in pigs and cows, 59 (2003) 61

Sexed spermatozoa
Production of piglets using intracytoplasmic sperm injection (ICSI) with flowcytometrically sorted boar semen and artificially activated oocytes, 59 (2003) 961

Sexing
Commercialization of animal biotechnology, 59 (2003) 125
Economics of selecting for sex: the most important genetic trait, 59 (2003) 585
Male-specific DNA sequences in pigs, 59 (2003) 841

Sex-reversal syndrome

A sporadic case of the sex-reversed mare (64,XY; SRY-negative): molecular and cytogenetic studies of the Y chromosome, 59 (2003) 1597

Sheep

Current status of embryo technologies in sheep and goat, 59 (2003) 171

Fertility of ram semen frozen in Bioexcell® and used for cervical artificial insemination, 59 (2003) 1157

New technology for vitrification and field (microscope-free) warming and transfer of small ruminant embryos, 59 (2003) 1209

Factors affecting the survival of sheep embryos after transfer within a MOET program, 59 (2003) 1265

Serum thyroid hormones and reproductive characteristics of Rambouillet ewe lambs treated with propylthiouracil before puberty, 59 (2003) 1403

Effects of epidermal growth factor on early embryonic development after in vitro fertilization of oocytes collected from ewes treated with follicle stimulating hormone, 59 (2003) 1449

Ultrasonographic appearance of clinically healthy testicles and epididymides of rams, 59 (2003) 1959

Sheep reproduction

Ultrasonographic appearance of clinically healthy testicles and epididymides of rams, 59 (2003) 1959

Sika deer

Recovery and cryopreservation of sika deer (*Cervus nippon*) spermatozoa from epididymides stored at 4 °C, 59 (2003) 813

Sire effect

Effect of reducing sperm concentration during IVF on the ability to distinguish between bulls of high and low field fertility: work in progress, 59 (2003) 1575

Skin cryobanking

Rabbit and pig ear skin sample cryobanking: effects of storage time and temperature of the whole ear extirpated immediately after death, 59 (2003) 1469

Small ruminant

New technology for vitrification and field (microscope-free) warming and transfer of small ruminant embryos, 59 (2003) 1209

SOD

Effect of local interaction of reactive oxygen species with prostaglandin $F_{2\alpha}$ on the release of progesterone in ovine corpora lutea in vivo, 59 (2003) 1335

Somatic cell nuclear transfer

Nuclear reprogramming of cloned embryos produced in vitro, 59 (2003) 33

Somatic cloning

Rabbit and pig ear skin sample cryobanking: effects of storage time and temperature of the whole ear extirpated immediately after death, 59 (2003) 1469

Sow

Effect of probe location on changes in vaginal electrical impedance during the porcine estrous cycle, 59 (2003) 1325

Exogenous prostaglandin $F_2\alpha$ at time of ovulation improves reproductive efficiency in repeat breeder sows, 59 (2003) 1479

Effect of follicle-stimulating hormone on nuclear and cytoplasmic maturation of sow oocytes in vitro, 59 (2003) 2017

Soy-bean lecithin

Fertility of ram semen frozen in Bioexcell® and used for cervical artificial insemination, 59 (2003) 1157

Sperm

Artificial insemination: the state of the art, 59 (2003) 571

Economics of selecting for sex: the most important genetic trait, 59 (2003) 585

Sperm function test

Gonadotropin exposure, salt storage and storage duration affect penetration of domestic cat oocytes by homologous spermatozoa, 59 (2003) 1503

Sperm heads

Effect of processing and measuring procedures on estimated sizes of bull sperm heads, 59 (2003) 1765

Sperm membranes

Membrane changes during different stages of a freeze–thaw protocol for equine semen cryopreservation, 59 (2003) 1693

Sperm preservation

In vitro survival of bovine spermatozoa stored at room temperature under epididymal conditions, 59 (2003) 1093

Sperm sorting
Production of piglets using intracytoplasmic sperm injection (ICSI) with flowcytometrically sorted boar semen and artificially activated oocytes, 59 (2003) 961

Sperm subpopulation
Identification of sperm subpopulations with specific motility characteristics in stallion ejaculates, 59 (2003) 1973

Sperm vector
Development of efficient strategies for the production of genetically modified pigs, 59 (2003) 95

Spermatid
New microinsemination techniques for laboratory animals, 59 (2003) 87

Spermatogenesis
Prospects for spermatogenesis in vitro, 59 (2003) 73
Normal telomere lengths of spermatozoa in somatic cell-cloned bulls, 59 (2003) 1557

Spermatozoa
Buffalo and cattle hybrid embryo development is decreased by caffeine treatment during in vitro fertilization, 59 (2003) 709
Reproductive period affects lipid composition and quality of fresh and stored spermatozoa in Turkeys, 59 (2003) 753
Recovery and cryopreservation of sika deer (*Cervus nippon*) spermatozoa from epididymides stored at 4 °C, 59 (2003) 813
Activity of angiotensin-converting enzyme (ACE) in reproductive tissues of the stallion and effects of angiotensin II on sperm motility, 59 (2003) 901
Effects of oviductal and cumulus cells on in vitro fertilization and embryo development of porcine oocytes fertilized with epididymal spermatozoa, 59 (2003) 975
Excess nuclear DNA in spermatozoa of guinea fowl, 59 (2003) 1685
Semen characteristics of genetically identical quadruplet bulls, 59 (2003) 1865

Spermatozoa morphology
Evaluation of fresh and frozen-thawed semen of individual ganders by assessment of spermatozoa motility and morphology, 59 (2003) 1627

Spermatozoon
New microinsemination techniques for laboratory animals, 59 (2003) 87

Stallion spermatozoa
Identification of sperm subpopulations with specific motility characteristics in stallion ejaculates, 59 (2003) 1973

Statistics
Dairy cattle production in Europe, 59 (2003) 563

Stem cell
Development of efficient strategies for the production of genetically modified pigs, 59 (2003) 95

Storage
Artificial insemination: the state of the art, 59 (2003) 571
In vitro and in vivo comparison of Ham's F-10, Emcare holding solution and ViGro holding plus for the cooled storage of equine embryos, 59 (2003) 1615

Stored ovaries
Timing of nuclear maturation of nonstored and stored domestic cat oocytes, 59 (2003) 1567

Superovulated cattle
Studies of the pathogenesis of bovine pestivirus-induced ovarian dysfunction in superovulated dairy cattle, 59 (2003) 1051

Superovulation
Current status of embryo technologies in sheep and goat, 59 (2003) 171
Estrus induction following PGF2α treatment in the superovulated buffalo (*Bubalus bubalis*), 59 (2003) 1203
Effect of recombinant bovine somatotropin on superovulatory response and recipient pregnancy rates in a commercial embryo transfer program, 59 (2003) 1919

Superoxide dismutase
Antioxidant requirements for bovine oocytes varies during in vitro maturation, fertilization and development, 59 (2003) 939

Survival
Behavioural development in the neonatal lamb: effect of maternal and birth-related factors, 59 (2003) 1027

Tall fescue
Impact of consuming tall fescue seeds infected with the endophytic fungus, *Neotyphodium coeno-*

phialum, on reproduction of chickens, 59 (2003) 1313

Technology
New technology for vitrification and field (microscope-free) warming and transfer of small ruminant embryos, 59 (2003) 1209

Telomeres
Normal telomere lengths of spermatozoa in somatic cell-cloned bulls, 59 (2003) 1557

Testicle
Ultrasonographic appearance of clinically healthy testicles and epididymides of rams, 59 (2003) 1959

Testis
Seasonal timing of sperm production in roe deer: interrelationship among changes in ejaculate parameters, morphology and function of testis and accessory glands, 59 (2003) 1487

Testosterone
Selective control of the estrous cycle of the dog through suppression of estrus and reduction of the length of anestrus, 59 (2003) 1441
Innervation of vas deferens and accessory male genital glands in the water buffalo (*Bubalus bubalis*). Neurochemical characteristics and relationships to the reproductive activity, 59 (2003) 1999

Thermoresistance
Quality of canine semen submitted to single or fractionated glycerol addition during the freezing process, 59 (2003) 821

Thioredoxin (TRX)
Effects of thioredoxin on the preimplantation development of bovine embryos, 59 (2003) 863

Thyroxine
Serum thyroid hormones and reproductive characteristics of Rambouillet ewe lambs treated with propylthiouracil before puberty, 59 (2003) 1403

Timing of IVM
Timing of nuclear maturation of nonstored and stored domestic cat oocytes, 59 (2003) 1567

Totipotent cell lines
Gene expression and chromatin structure in the pre-implantation embryo, 59 (2003) 3

Transfer
New technology for vitrification and field (microscope-free) warming and transfer of small ruminant embryos, 59 (2003) 1209
In vitro and in vivo comparison of Ham's F-10, Emcare holding solution and ViGro holding plus for the cooled storage of equine embryos, 59 (2003) 1615

Transgenic
Coordination between donor cell type and cell cycle stage improves nuclear cloning efficiency in cattle, 59 (2003) 45
Artificial chromosome vectors and expression of complex proteins in transgenic animals, 59 (2003) 107
Transgenic swine for biomedicine and agriculture, 59 (2003) 115
Commercialization of animal biotechnology, 59 (2003) 125
Production of transgenic goats by pronuclear microinjection of in vitro produced zygotes derived from oocytes recovered by laparoscopy, 59 (2003) 831

Transgenic pig
Development of efficient strategies for the production of genetically modified pigs, 59 (2003) 95

Transport
In vitro and in vivo comparison of Ham's F-10, Emcare holding solution and ViGro holding plus for the cooled storage of equine embryos, 59 (2003) 1615

Triiodothyronine
Serum thyroid hormones and reproductive characteristics of Rambouillet ewe lambs treated with propylthiouracil before puberty, 59 (2003) 1403

TUNEL
Influence of oxygen tension on apoptosis and hatching in bovine embryos cultured in vitro, 59 (2003) 1585

Turkey
Reproductive period affects lipid composition and quality of fresh and stored spermatozoa in Turkeys, 59 (2003) 753

Ultrasonography
Repeatability and accuracy of reproductive tract scoring to determine pubertal status in beef heifers, 59 (2003) 1087

Ultrasound

Improved collection and developmental competence of immature macaque oocytes, 59 (2003) 699

Efficacy of linear and convex transducers for ultrasound-guided transvaginal follicle aspiration, 59 (2003) 1435

Ultrasonographic appearance of clinically healthy testicles and epididymides of rams, 59 (2003) 1959

Ultrasound-guided ovum pickup

New developments reproductive technologies in deer, 59 (2003) 189

Uterine edema

Association of uterine edema with follicle waves around the onset of the breeding season in pony mares, 59 (2003) 1181

Uterus

Effects of different sexual stimuli on oxytocin release, uterine activity and receptive behavior in estrous sows, 59 (2003) 849

Components of litter size in gilts with different prolactin receptor genotypes, 59 (2003) 915

The effect of intrauterine administration of estradiol on postpartum uterine involution in cattle, 59 (2003) 1357

Presence of caprine arthritis–encephalitis virus (CAEV) proviral DNA in genital tract tissues of superovulated dairy goat does, 59 (2003) 1515

Vagina

Effect of probe location on changes in vaginal electrical impedance during the porcine estrous cycle, 59 (2003) 1325

Vertical transmission

Lack of association of *Mycobacterium avium* subsp. *paratuberculosis* with oocytes and embryos from moderate shedders of the pathogen, 59 (2003) 1651

Viability

Influence of extender, temperature, and addition of glycerol on post-thaw sperm parameters in ram semen, 59 (2003) 1241

Vitamins

The effect of vitamins during maturation of caprine oocytes on subsequent developmental potential in vitro, 59 (2003) 1373

Vitrification

Growth factors and growth hormone enhance in vitro embryo production and post-thaw survival of vitrified bovine blastocysts, 59 (2003) 1393

Cryopreservation of goat oocytes and in vivo derived 2- to 4-cell embryos using the cryoloop (CLV) and solid-surface vitrification (SSV) methods, 59 (2003) 1839

Vitrification of rat embryos at various developmental stages, 59 (2003) 1851

Weaning to estrus interval

Exogenous prostaglandin $F_2\alpha$ at time of ovulation improves reproductive efficiency in repeat breeder sows, 59 (2003) 1479

Xenotransplantation

Bringing up small oocytes to eggs in pigs and cows, 59 (2003) 61

Transgenic swine for biomedicine and agriculture, 59 (2003) 115

Yak

Reproduction in female yaks (*Bos grunniens*) and opportunities for improvement, 59 (2003) 1303

Y-specific sequence

Use of primers derived from a new sequence of the bovine Y chromosome for sexing *Bos taurus* and *Bos indicus* embryos, 59 (2003) 1415

Zebrafish (*Danio rerio*) embryos

Effects of methanol and developmental arrest on chilling injury in zebrafish (*Danio rerio*) embryos, 59 (2003) 1545

Zona pellucida

Gonadotropin exposure, salt storage and storage duration affect penetration of domestic cat oocytes by homologous spermatozoa, 59 (2003) 1503

Zygote

Effects of gas conditions, time of medium change, and ratio of medium to embryo on in vitro development of horse oocytes fertilized by intracytoplasmic sperm injection, 59 (2003) 1219